SOUTHERN PLANTER

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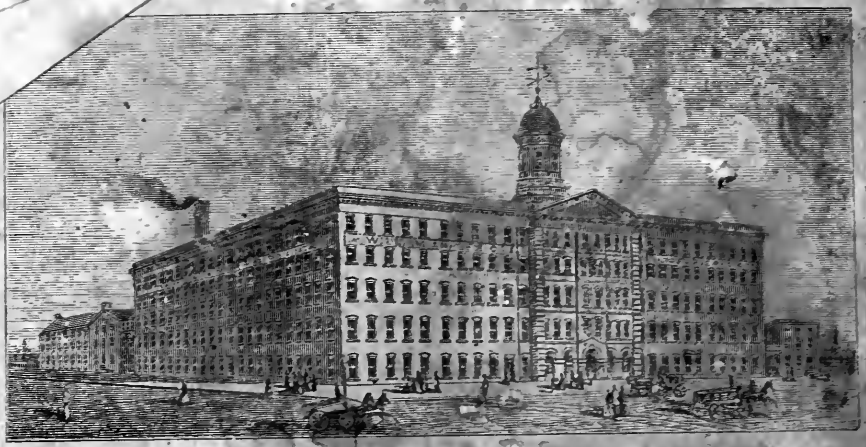

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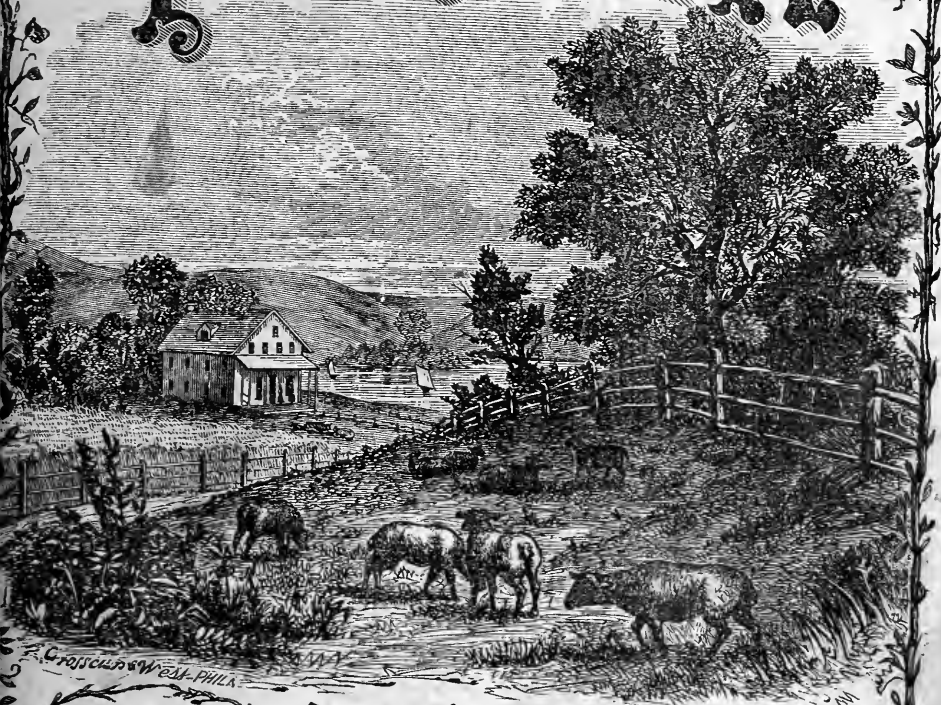
JANUARY, 1871.

The Southern Planter AND FARMER



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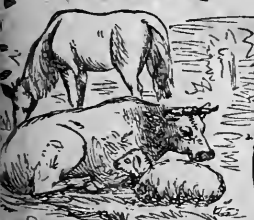

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THE SOUTHERN PLANTER AND FARMER.

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House, and Terrell's Store. Cuckoo Township, southeast of Louisa Court House, and parallel to it, with 137 square miles of territory, and voting at Thomson's Cross Roads, Cuckoo and Fredericks Hall; and Jackson Township, southeast of Cuckoo and next to the Hanover line, with 114 square miles of area, and having its voting places at Jones' Mill, Jackson P. O., and Bumpass' Depot.

Louisa county is situated in the belt of country that extends through Virginia from northeast to southwest between the Piedmont country, the land of hills and "coves" (enclosed valleys), on the west and the Tidewater country, the land bathed by the ocean waters, on the east, and that may very properly be called the "middle country," forming a vast undulating plain that slopes from the eastern base of the outliers of the Appalachain mountains, from an elevation of 400 or 500 feet for an average of 75 miles, southeastwardly, to the granite rim that bounds the Tide-water country; this is the region of metamorphic rocks, of slates and schists of various kinds, running northeast and southwest, parallel with the mountains to the west, and generally dipping to the southeast, containing strata of gold bearing quartz, roofing and other slates and deposits of valuable iron ores.

The following table gives the population of Louisa at each census:

Census.	Free White.	Free Colored.	Slaves.	Total.
1790	3 880	14	4 573	8 467
1800	5 768	132	5 992	11 892
1810	5 313	157	6 430	11 900
1820	5 967	219	7 560	13 746
1830	6,468	301	9 382	16 151
1840	6 047	376	9 010	15 433
1850	6 429	398	9 864	16,691
1860	6 183	324	10 194	16,701
1870				16,339

At the first census, in 1790, there were about 16 inhabitants to each square mile, and in 1870 about 32, the population having doubled in 80 years. This was one of the 10 large slaveholding counties of Virginia. The county has but few manufacturing establishments—57 of all kinds in 1860: of these, 13 were grist mills, 14 saw mills, and 10 tobacco factories; the capital invested was $218,800, and the value of the articles produced $455,950—the leading manufacture was tobacco.

By the census of 1860 there were in this county 156,950 acres of improved and 122 889 acres of unimproved land, in farms, valued at $2.232 979, an average of $7 70 per acre; the land was divided into 718 farms, 430 of these contained between 100 and 500 acres, 65 had between 500 and 1,000, and 7 contained over 1 000 acres; so *most* of the farms were large. The value of the real estate was $4 873 166 of the personal, $9 873 828, the aggregate $14 746 994. The live stock of the county was 2 485 horses, 1 037 mules, &c., 3,050 milch cows, 2,058 work oxen, 4 377 other cattle, 7 674 sheep, 16 259 swine, all valued at $556 856. The county produced 258 265 bushels of wheat, 383 683 of corn, 165,111 of oats, 4,798 087 pounds of tobacco, 16 422 pounds of wool, 14 904 bushels of Irish potatoes, and 17,950 of sweet, 93,860 pounds of butter, 12,427 tons of hay, 11 614 pounds of honey, &c. In the production of tobacco this was one of the 6 most productive counties in the State, producing about one twenty-fifth of the crop of the State. The county had 25 churches with accommodations for 14 600, very nearly the whole population: 11 of the churches were Baptist and 7 Methodist. The number of families in the county was 1,217.

JED. HOTCHKISS.

Staunton, Va., Dec 20, 1870.

Louisa, one of the Colonial counties of Virginia was formed from Hanover, in 1742, by the General Assembly, in session at Williamsburg, during the administration of Gov Gooch and in the reign of George II.; it was named in honor of Louisa, a daughter of the reigning monarch, who, subsequently by marriage became Queen of Denmark.

THE SOUTHERN

PLANTER & FARMER

DEVOTED TO

Agriculture, Horticulture and the Mining, Mechanic and Household Arts.

Agriculture is the nursing mother of the Arts.—XENOPHON.
Tillage and Pasturage are the two breasts of the State.—SULLY.

JAMES T. JOHNSON,
JOHN M. ALLAN, } - - - - - - MANAGING EDITORS.

New Series. RICHMOND, VA., JANUARY, 1871. Vol. V---No. 1.

Agricultural Department.

Farm Schools.

So much has been written upon the establishment of agricultural, farm, and labor schools, and so little has been successfully done in this direction, that the subject is approached with some trepidation. But believing that the necessity exists for the adoption of some plan looking to the *proper* education of farmers, and also of farm laborers, it becomes a duty to call to it the attention of our readers. In this State, nothing very practical has yet been done. Two institutions of learning have added Chairs of Agriculture to their faculties, and one is about establishing an experimental farm; but these will afford few more facilities for obtaining agricultural knowledge than could have been had hitherto in almost any collegiate course. The experimental farm, conducted solely as such, may add something to both the theory and practice of the conductor, but nothing directly to those that are being taught. There may be a few wealthy agriculturists in the country at large who would desire that their sons should learn the science of farming alone, not expecting them to engage in agriculture for profit. But the few of this class are lost in the multitude who must know how to plow, and who must have had the physical training necessary to fit them for such labor. We

know that some of the most enthusiastic advocates of agricultural colleges do not see the necessity of primary or, more properly speaking, practical agricultural schools—claiming that home training on the farm sufficiently accomplishes the object. This certainly is not true for that class of persons who would be most benefitted by this kind of teaching. It is, of course, intended to teach a boy something else than how to work, and, may be, to prepare him for a creditable reception at an agricultural college. How is this to be done at home? Is the father to devote one half of the day to the superintendence of a school and hearing recitations? If farmers are competent, and have time to instruct their children in everything else, as well as in farming operations, there is no longer the necessity for schools of any kind, for the same capacities and opportunities belong, at least in an equal degree, to persons engaged in any other occupation. Such a thing is rarely, if ever, attempted. If the boy can be spared at all from the farm, he is sent to the nearest school, where, either in or out of, or on the way to or from it, he too often idles away the best part of the day. After a few years of this he is either sent from home to some higher school from whence he returns with no practical knowledge of farm work or management, or goes at once to work on the farm with no habits of industry, no capacity for labor, and under the same system which has, in all probability, been depleting the land for several generations. It is earnestly believed that the remedy for all this will be found in the establishment of schools in which a portion of the time will be occupied in intellectual education, and another portion in physical development, giving to the latter its due prominence, and having always in view the inutility of teaching a boy that certain things should be done without teaching him how to do them. It is acknowledged that there are many difficulties in the way of establishing farm schools, and that they have generally failed; but we firmly believe in their final success. We must first understand that an intelligent working farmer may and should occupy as elevated a position as one whose means may have placed him beyond the necessity of personal labor—that in fitting our boys to become successful farmers we are not lowering their future social position. With the removal of this prejudice will depart the objections to sending them to a school where physical labor forms a part of the curriculum. If a man can get so far as to determine that his son shall be a farmer, no ground for objection to such teaching can remain, for no true father is willing to restrict his son to such an education as can only give him mediocrity in the occupation he has chosen.

One cause of failure, hitherto, in such schools as we advocate, has been in the effort to make them self-sustainig by the labors of the scholars. The labor was unskilled, and could not, from the nature of the institution, be constantly applied—not available, probably, at times when most needed—and hence not adapted to successful farming operations. But we see no reason why scholars should not pay as much for this sort of education as in other schools; and then the regular work of the farm could be performed by hired hands when the *lesson* was over. But these schools need not be all alike either in object or conduct. Another kind may be established to afford opportunities for education to young men who are without money, and are willing to pay in the only coin they have—their labor. A farmer in an adjoining State found much difficulty in getting his farm work done after the war; and, being capable of giving instruction, bargained with four young men to teach them half the time for their labor the other half. He says the experiment was eminently successful, and when, at the end of the year, three of them went away, there were five applicants for their places. This may just as well be done on a larger scale; and if no individual is found bold enough to make the trial, then it is to be hoped that the Agricultural Society will give it their attention, and, if unable to accomplish anything alone, that they will seek and obtain the aid of the State.

Virginia and Immigration.

"C. H. G., Providence, R. I.—At present I am in a business in this city that would probably make me rich in time if my health would permit, but of that I am afraid, as it is poorer every year: Now, I want to go West and try stock-raising, as I always had a liking for that, beside some experience. I am worth about $5,000; now, I want you to tell me which State (all things considered) it would be best for me to go to. I suppose the most important qualifications would be cheap land, mild winters, and a healthy climate.

"J. B. Lyman—This young man is sensible to desire to leave town, but it is impossiule for us to say where he should go. One might say Iowa, another Kentucky or Western North Carolina. He should (as he seems to have plenty of money) visit several localities and judge for himself. Stock-raising is a good, independent sort of business, and he can no doubt better himself, both physically and financially, by engaging in it."—*Far. Inst. Club.*

We have frequently noticed inquiries similar to the above addressed

to the New York Farmers' Club, and have as often been surprised to see the answers that are returned. In no single instance do we recollect having seen Virginia recommended as a good locality for those wishing cheap and productive lands; and we begin to think that the geographical knowledge of our New York agriculturists must be somewhat limited. It is true that each State has its claims, and doubtless, as Mr. Lyman says, it would be difficult to give a satisfactory answer to such interrogatories; still, the persistence with which mention of Virginia has been avoided by this Club, leads us to conclude either that the members are ignorant of the advantages it offers, or are disposed, for some unexpressed reason, to ignore them. Hoping that it may be the first cause, and not the latter, we propose to state a few reasons why Virginia offers extraordinary inducements to those who wish to invest in land either for agricultural, horticultural, or stock-raising purposes.

First—The climate is temperate and salubrious; our winters are never severe, in the sense that that word is used in the Middle, Western, and New England States; stock range our mountains the entire winter without shelter.

Second—The land is rich and productive. The prairies of the West do not produce better grass than the cattle-growing regions of Virginia.

Third—Land is cheap, comparatively and absolutely. Comparatively, even in the neighborhood of our large cities; quality, nearness to market, prospective value, &c., being considered. Absolutely, since magnificent grass lands lying within ten miles of the line of the Chesapeake and Ohio Railroad may be bought for one and two dollars per acre, and as cheaply along the Virginia and Tennessee Railroad.

Fourth—Access to market is freer than in any State in which land can be purchased at double the price for which it can be bought here. Take, for instance, the great cattle region of the western and southwestern portions of Virginia. Through one part the Chesapeake and Ohio Railroad runs, giving, with its connections, easy and rapid communication with Richmond, Alexandria, Washington, and Baltimore. Through the other, the great trunk line, the consolidated railroad with its connections, securing direct communication with all the above cities as well as with Lynchburg, Petersburg, and Norfolk.

It must be borne in mind that none of these roads are ever impeded by snow or frost, and are open during the entire year. Now, we ask, what other State presents so many advantages to the settler

and capitalist? Where will you find land and climate adapted to the production of tobacco, corn, oats, wheat, fruit of all kinds, and cattle only second (if second) to those of Texas, which can be bought from five to twenty dollars per acre, with direct rail and water communications with all parts of the continent? To all inquirers like C. H. G., we would say, come and look at Virginia before locating, and we do not fear their going elsewhere.

Goodwyn Agricultural Club.

The Club met at the residence of Mr. M. H. Hester, August 27, 1870. Mr. J. C. Taylor in the chair.

After the regular disposition of the previous proceedings, Mr. R. J. Hicks, who was appointed for an essay upon rotation of crops, excused himself, and gave the following verbally:

In our present cramped circumstances I think our aim is or should be to get the larget yield from the smallest surface Take, then, fifty acres for a two-horse farm. Lay off ten acres for tobacco—granting that to be indispensable to the prosperity of the farmer here. Make it thoroughly rich from home if possible, otherwise with the best commercial manure. It must not bring less than 1,500 pounds of tobacco. Follow with wheat and grass; twenty to twenty-five bushels for one, you will be apt to get. Then a good clover crop, standing one season, turn under and put in corn, cultivated level upon this turf, bringing from five to eight barrels per acre. Then comes the oat crop which I consider highly important and valuable, and the rotation is complete, and the land ready for another application of manure. This I consider the best manner to take out all the different fertilizing properties of the one application of manure—under this system of rotating from one time making rich you get five good crops, and leave the land in better heart and condition than when it was taken up. To increase your farm, sow peas and increase your number of sheep and cattle. But it is first necessary to come down to this fifty acres. You will find them more profitable than your two hundred or three hundred, cultivated as now. The present system of renting will carry you down. The success of our neighbor, Mr. W. O. Gregory, was mainly due to the fact that he used large numbers of sheep and cattle to bring him home-manure for his tobacco lots. He cultivated nothing but rich land, and consequently scarcely ever failed.

Mr. Goodwyn had a voluntary essay to offer, which the club could

take for what it was worth. It was as follows: "What I have desired and labored to accomplish has been the successful pursuit of agriculture, particularly by the members of this club. To this end I have constantly urged and repeat that it is of the first importance to preserve your land, and next to improve it. In order to its preservation, there is no better way than that recommended by our president, viz: horizontal plowing, not only in the preparation of the land, but also in the cultivation of the crop, on uneven or undulating surface—avoid by all means beds or ridges and hills for corn and tobacco—and to improve, it is of the utmost importance to accumulate all the manure the resources of the farm are capable of, and apply as fast as made to the surface, to be incorporated with the soil immediately before planting, and also to the growing crop as far as practicable, adopting the rotation of crops similar to that recommended by Dr. Hicks in his remarks to-day. Allot off a portion of land commensurate with the force to be employed, and continue it in some remunerative crop—corn, tobacco, wheat, clover, peas, grass, oats, &c. Allow no weeds to grow on this chosen ground. If you have more land than you can employ profitably, and cannot make a judicious sale of it, rather let it grow up than rent it to unskilled labor. Remember that all the inheritance your children can reasonably expect is the profit you may be able to make from the cultivation of the soil, and the land itself, and I conjure you, by all means, not to leave them barren fields which they will be forced to abandon, but rather cultivate in them a fondness for your pursuit by your own success. You live in a climate not excelled on this continent, and upon land, owing to the diversity of soils, capable of producing almost every crop known to the world. In addition to the above, Mr. G. furnished the following—

ROTATION FOR TWO-HORSE FARM.

Manure—First year, corn and tobacco. Second year, oats and wheat. Third year, peas and clover. Fourth year, tobacco and corn. Fifth year, wheat and oats. Sixth year, manure and commence again.

The president requested to hear from Mr. Charles Gregory regarding the use he had made of ashes this season. Mr. G. said he applied fifty bushels per acre (burnt from dead and refuse wood) upon some second year's land, and by the side of them 270 pounds of fertilizer per acre. Several gentlemen had seen the tobacco, and could mark no difference at all.

Mr. D. Cooper had applied some on tobacco, but was not pleased with the prospect, and had put on guano.

Here a little discussion arose upon the subject of manure composting, &c.

Mr. Goodwyn preferred his whiskey straight. If you have got stable manure, what is the use of mixing dirt along with it. Carry it to the field and incorporate it with the soil already there. Unless you get mighty rich dirt there is no sense in it—though I am not opposed to composting altogether.

Mr. W. Lewis had visited Edgecombe many years ago, and thought it was one of the poorest counties in the United States; but to-day it is one of the first counties in agriculture in North Carolina.

Mr. R. J. Hicks—Is it due to composting? the mixing of dirt is really no benefit, except to preserve the manure and keep it from heating.

Mr. Lewis thought it was all due to the great amount of composting done there.

The President remarked that composting was the royal road to success in agriculture.

Mr. E. H. Hicks was astonished how little real knowledge there was of farming. Last season, as a young planter, he followed advice, but would now advise others against the same advice. He threw up some stiff, red land with a two-horse plow, then opened a deep furrow with a subsoil lifter, filled the trench with manure and put fertilizer plentifully on top. The tobacco took a beautiful start; the rains in June ran it up rapidly. Then came a dry spell of two or three weeks, and now it is very narrow, indeed, whilst upon the same lot I tried broadcasting, and the result is I have got large, broad leaves of tobacco. The roots of the plant in the first instance could find nothing to feed upon when the time came for them to spread, whereas broadcast there was as much in the middle of the row to invite and nourish the roots as there was under the plant.

Mr. Goodwyn urged the importance of a little knowledge of chemistry to know how to economize manure, to rotate, &c. He instanced the two gentlemen who had experimented with ashes—the land of the one needed potash, the other did not.

Mr. J. C. Cooper remarked that it was difficult to keep the amount of stock necessary to manure twenty acres upon a two-horse farm, and he did not know that it would pay to hire and feed hands to cart dirt.

Mr. E. H. Hicks thought unless it did we could not farm.

Upon receipt of an invitation from Secretary Gray, of the Augusta Agricultural Congress the following resolution was introduced and passed:

Resolved, That we heartily endorse the patriotic purpose of organizing an Agricultural Association of the Cotton States, and that Messrs. E. H. and R. J. Hicks, S. A. Goodwyn, and Ro. and N. A. Gregory be appointed delegates to the Agricultural Congress to be held in the city of Augusta, October 26, 1870.

On motion of Mr. E. H. Hicks, the club adjourned to meet at his house, September 27, 1870.

NATHANIEL A. GREGORY, Sec'y.

Roads and Road Making.

Roads in this country must, from the nature of the case, be constructed of such materials as are available immediately along their lines, and must necessarily be more or less imperfect.

In this as in other countries the great enemy of roads is frost, and the only way to even partially prevent its ravages is to construct roads high enough to allow thorough drainage. The flat surfaces permitted on most roads in this country is their most radical defect. The result is rivers of mud in spring and autumn, and frozen ruts of indescribable ugliness and discomfort in winter until such time as the snow covers and fills them.

A few days' labor devoted to thorough ditching along the sides of roads and elevating the centres where they have settled below the proper grade would greatly mitigate the evils complained of. This is generally done, when done at all, by throwing back on the road the soil excavated from the ditches, a very erroneous method, and almost a sheer waste of labor. Such soil is generally composed of comminuted and pulverized material washed off from the road, and will only temporarily pack. As soon as it becomes very dry in snmmer it grinds up into a dust heap, and is blown off by winds, and washed off again by rains.

All soil used to raise the level of roads should be new soil, not the washings of the roads, which latter should be carted away. Where roads are much traveled these washings are a valuable manure, and it would pay well to cart them into the lands lying along such roads, from which soil of inferior fertility might be taken to form the roadways.

Wherever practicable, a deep hard bed of stone or timber should be laid below the reach of frost, upon which the surface material should be distributed. Gravel stands unrivaled for road surfaces, but it is not available in many localities. Broken stone, however, is obtainable oftentimes where gravel cannot be got, and answers the purpose very well.

We have seen a road laid through a swamp made with a bed of rough logs, well sunk down, and covered with a mixture of blue clay and broken stone, which was excellent in all respects, having almost as good and permanent a surface as macadam.

It is usual to work country roads early in the summer, to repair the defects caused by spring upheavals. This done, they are generally left till the ensuing season, when the same operation is repeated. But a little labor late in the fall would pay well on most roads. This labor should be expended in securing proper drainage. All sluices should be opened if stopped, the roads raised where the summer wear and tear have depressed them, and their surfaces made smooth, so that the water may run off with the utmost facility. Neglect in these particulars is always dearly paid for in the miring of teams and wagons, and in wear and tear of both animals and vehicles.—*Scientific American* (*extract*).

Deep and Shallow Plowing.

I have paid a great deal of attention to what is called deep plowing, and I never yet have seen any plowing that can average over six inches deep, and that looked so deep, to an inexperienced person, it could easily be palmed off as eight or ten inches deep. But after trying satisfactorily both deep and shallow plowing, I have come to the conclusion that, plowing should be regulated to suit the land we were plowing. If I went into a field with but four inches soil, I would turn over that land but three to four inches, and subsoil in the furrow of the turning plow; that would be my system for the first time I plowed such lands. And the next year if there were stubble or weeds on the land, I would turn under again, going this time from four to six inches—that is, I would never plow any land deeper than its soil—the first plowing with a turning plow; but each succeeding breaking up, I would gradually go deeper, until I reached the depth of seven or eight inches, which is the maximum depth I have yet seen done by the very best plows, plowmen and team of two and three horses; and if we have weeds, stubbles, clover, or peas to turn under annually when breaking up, a soil can be made deeper than when we first commenced.

My rule of plowing is, to be governed entirely by the quality of lands I am going to plow in. If deep soil, I plow deep, and do not subsoil. If shallow soil, I plow shallow, and subsoil; and put on the land such crops as will make the most rubbish to turn under—

and, in time, a field of shallow soil can be deepened by judicious plowing and rotation.

I would never turn up the clay to the surface if it can be avoided; and if a field had so little soil, I would break up such lands entirely with subsoil plows—then sow them down with small grain, cut stubbles long, and then turn under as above described.

There is no implement we use of so much importance as the plow; it is our first and greatest implement; hence every farmer should make the plow and plowing his study, he ought so to understand it, as to be enabled to instruct or aid the manufacturer in its construction—telling him what he wants, and what is necessary to make a plow perfect. But, as it is, there are so few farmers who understand the plow and plowing, we have been dependent entirely upon the manufacturer to suit us in plows, in accordance with their own ideas of what the plow should be, and right or wrong in construction, we find but few who know it. The plow may break and turn well, and the draft may be too heavy, or the draft may be light, and the work of the plow imperfectly done; also, the fault sometimes lies in the gearing in of the beam. But be the fault where it is, the farmer should so understand the plow, plowing and gearing in of the same, as to detect the error and point out the remedy. If not, his plowings are accidental, whether right or wrong.

In turning lands, it will be noticed that some plows turn the furrow slice flat over, or lap on the principle of shingling. Where the plow turns the furrow over flat, I prefer such a plow for manurial purposes, that is, to turn under clover, weeds, or stubbles.

But in breaking the ground for cultivation, and especially for corn, give me the plow that lodges its furrows—as, when the furrows are so lodged, the ground remains longer loosened and broken—as it is not so easily run together and compressed by rains as when the turning over is flat.—*John L. Dent, in So. Agriculturist.*

Cost of Labor and Subsistence.

Mr. Edward Young, who is in charge of the Bureau of Statistics, has prepared as a supplement to the report of the "Special Commissioner of the Revenue," a series of tables which have particular interest for every one who pays wages, and for every one who receives them for physical labor. This document was received some weeks ago, but the press of other matter has prevented its being noticed. The tables were intended to have accompanied the report before mentioned, but are published as a public document by them-

selves, and constitute a pamphlet of 75 pages 8vo. To farmers they have an especial significance. Those touching farm labor enable us to compare the wages paid in 1860 with those paid in 1869 for experienced and ordinary farm hands, in winter and in summer, with board and without; and to compare these with the retail price of all the necessaries of life, and the leading articles of consumption, prices of board, etc. Let us take, for example, the average wages paid experienced and ordinary farm hands, with board—

	Experienced Hands.		*Common Hands.*	
Daily Wages in	1860.	1869.	1860.	1869.
New England,	$1.00	$1.55	$ .81	$1.27
Middle States,	.74	1.29	.57	.94
Western States,	1.03	1.56	.83	1.21
Southern States,	.67	1.37	.47	.66
Average,	.86	1.32	.67	1.02
Monthly Wages in	1860.	1869.	1860.	1869.
New England,	17.10	27.61	13.79	21.42
Middle States,	13.06	20.80	9.71	15.28
Western States,	16.26	24.42	13.12	19.65
Southern States,	11.97	16.31	9.23	11.84
Average,	14.60	22.29	11.46	17.05

Local causes operate to a considerable extent in determining the cost of labor in different sections; and in estimating the percentage of increase in wages, the population of the district should be taken into consideration. Taking each State by itself, however, we have the following figures given to show this in the United States, exclusive of the Pacific States and Territories: In Maine and New Hampshire, wages for good farm hands have increased 57 per cent.; in Vermont and Massachusetts they have risen 50 per cent.; in Rhode Island 53, Connecticut 77, New York 74, New Jersey 91, Pennsylvania 69, Delaware 100, Maryland 48, West Virginia 47, Ohio 45, Indiana 50, Illinois 40, Michigan 52, Wisconsin 44, Minnesota 51, Kansas 26, Nebraska 75, Missouri 58, Kentucky 29, Tennessee 40, Virginia 50, North Carolina 22, South Carolina 17, Georgia 5, Alabama 22, Mississippi 33, Arkansas 37, Louisiana 25, Texas 47. These comparisons indicate in part the magnitude of the immense tax which land and capital pay to labor at prevailing prices; and yet, we venture to say that, except in isolated ca-es, the workingmen are not essentially better off nore mor comfortable than before. They are more independent of their employers' wishes, oftener dis-

charged, lose more time, get paid less regularly, oftener lose their pay, and are, besides, more frequently tempted to spend their money foolishly.

The results have been to discourage many farmers. As little labor is engaged as it is possible to get along with, and farmers have forced themselves to be content with inferior labor at prices approaching old rates. How the farmer is affected may be seen by a comparison of the prices of common farm produce in the New York market at the close of the year 1860, and those realized for the crop of 1869, which we gather from the files of the *Agriculturist*. Wheat flour is now, perhaps, 14 per cent. higher, though good flour can be bought at the same price it sold for then; corn meal is about 20 per cent. higher, wheat 27, corn 16, potatoes 26 per cent. lower, cotton 55 per cent. higher. Beef cattle are 21½ per cent. higher, sheep 8, and hogs 35. Besides, prices have been by no means so uniform as in former years, and the fluctuations result almost always in gain to speculators and in loss to farmers; moreover, the cost of freight from the West is greatly increased, so that, without deducting this, these figures do not adequately indicate the small percentage more than he got in 1860, which the farmer realizes for most of his products. These causes operating, as they do, over the whole country, have—who can doubt?—essentially decreased our national prosperity. A large class of farmers are in a measure helpless—they must have hands or their crops are lost. High wages are offered and paid; but just in the height of the harvest season, the men having twice as much money as it cost them to live, cannot resist the temptations of the tavern, and so lose one or two days in each week. Thus there is not only less work done, but less for the money paid, and much less in proportion to the prices of farm produce. At the same time the cost of articles of food, of clothing, of board, of everything, except house-rent, has gone down very much since the causes operated which upset prices in the years following 1861, which inaugurated the war, greenbacks, and wild speculation in the necessities of life.

It is vain to suppose that such a state of things can long continue. There must be a radical change in the relations of labor to the landholder. Less land will be cultivated, less labor employed, and fewer products raised. The reaction will bear severely upon the improvident laborer; we shall suddenly find the labor market glutted, and wages below what they ought to be for the good of the laborer. A similar result may be brought about in another way—namely, by the importation of cheap labor; a result, perhaps, to be deprecated,

but less evil in its effects than the prostration of agriculture by the attempt of labor to master and manage capital. Or, a system under which tenant farmers will work the land on short leases, or on shares, will result.—*Hearth and Home.*

Experimental Wheat.

Mr. Lawes has just thrashed his *twenty-seventh* crop of wheat from his experimental field In 1844, the product of the plot having no manure was 15 bushels per acre. Since then, wheat has been taken *every year* on this plot without manure, and the yield in 1870 was exactly 15 bushels per acre. The plot which has received an annual dressing of 16 tons barn-yard manure yielded first year (1844), 22 bushels, and the last year (1870), 36½ bushels per acre. The plot receiving a liberal allowance of ammonia and other artificial manure, produced this year, 45½ bushels per acre. In 1863, which was one of the best wheat years ever known in England, the yield on the no-manure plot was 17¼ bushels per acre; with barn-yard manure, 44 bushels, and with artificial manures, over 55½ bushels per acre. In 1863, one of Mr. Lawes' fields of wheat in ordinary rotation, averaged 62 bushels per acre. This year his fields averaged 34, 44½, 39⅝, and 44¼ bushels per acre. The season has been remarkably dry and hot in England, but on highly manured land the yield is fully up to the average.

"It should be mentioned," says Mr. Lawes, "that the yields of 34 and 41½ bushels were both in the same field, the smaller produce being due to loss of plant, so much complained of over large wheat-growing districts this year."

In another field, the whole of which was uniformly manured, thirteen different varieties of wheat were sown, and the average results of five lots already thrashed is 48¾ bushels per acre, and more than 65½ pounds per bushel; the weight of one variety reaching very nearly 67 pounds per bushel. I am exceedingly glad that Mr. Lawes has undertaken to test different varieties of wheat, with his great experience in the art of experimenting we may look for the most trustworthy results.—*Am. Agriculturist.*

Width of Axletrees.—The *Philadelphia Ledger* thinks it would be much better if axletrees were not made of a uniform length for the reason that the public roads would not then be so much worn in ruts, and would last longer and cost less for repairs. Also, that it would be easier for the horses.

Success in Farming.

I have to-day visited a neighbor whose farm contains only twenty-eight acres. He has owned it and managed it for many years. His stock this year consisted of several horses and oxen and twenty-eight cows, in addition to a considerable number of fowls. He grows no fancy stock of any kind; sells milk, cream, roots, poultry, and eggs. He buys some grain for his poultry and some meal for his cows, though he has a good field of corn every year. All of the pasture required for his large stock, and all the hay and other long fodder consumed on the place, together with a good supply of apples, are the product of his twenty-eight acres of land. The great secret of his success is to be sought in plenty of manure and thorough work, managed, of course, in the most skillful manner. His cash sales for 1870 will fall but little, if any, short of $4,000.

I have another neighbor who begun with a fine farm of over one hundred acres, and capital enough to have made a first-rate farmer of an energetic man. He has probably never sold enough from his place to pay his yearly bills, and his land has run down to low-water mark. These two men, living in the same township, and with equal facilities, illustrate perfectly the truth I have endeavored to set forth above. The one went to work in an over-cautious, penny-wise way, scrimping here and scrimping there, trying to cheat nature out of her just dues; and he has come to grief. The other went into farming as a business that was worthy of his best efforts, and whenever he saw an opportunity to invest a dollar in his farm to good advantage, he made the investment as soon as he could get the dollar. He acted on the belief that no bank in the world will pay such good interest as well-farmed land; and, so far as the plain and simple farming he has followed afforded him the opportunity, he has omitted nothing—nothing that could add to his facilities. The result is, that he is more than forehanded, and that, if he had his life to live over again, he would turn his attention to farming as the best opening that offers itself to a young man of energy and ability.—*Ogden Farm Papers in Am. Agriculturist.*

A philosopher says, if you want a pair of boots to last four years, melt and mix four ounces of mutton-tallow, apply while warm, place the boots in a closet, and go barefoot.

Texas has a new game of cards. One holds a revolver, the other holds the cards. A coroner holds the inquest.

The *Journal of Agriculture* gives the following comparisons of average samples of "Norway" and "Surprise" oats:

100 seeds of the Surprise weighed 49 grains.
100 " " Norway " 38 "

Accordingly, in one bushel there would be—

Of the Surprise, at 37½ lbs., 535,000 seeds.
" Norway, at 25 " 460,000 "

This will already show that the Surprise oats must be more compact, more solid, and of a less chaffy nature.

Taking now 100 seeds of each variety, and shelling out the real grain which lies inside of the hard husks, we had

100 of the Surprise weigh 30 grains.
100 of the Norway weigh 20 grains.

There is, then, of meal-furnishing substance in one bushel

Of the Surprise, almost 23 pounds.
Of the Norway, a little over 13 pounds.

Now, to apply this to sound horse-logic, we see that when feeding one bushel of the Norway we give our horse only 13 pounds of life-sustaining and muscle-forming substance; when in the heavy white oats we offer him 23 pounds instead. Accordingly, also, should the price of Norway range proportionately; when a choice white oats fetches fifty cents, per bushel, the Norway is worth only twenty-eight cents, and scarcely that. For I am convinced from the smooth appearance of the inner seed of the Surprise, and the hairy exterior of that of the Norway, that the latter would make a larger proportion of worthless *bran* than the white oats.

I have also raised this year, from small parcels of seed sent out by Col. Capron of the Agricultural Bureau, the white Swedish oats and the white Schonen oats. They are so much like the Surprise that I shall not keep them separate hereafter.

In order to establish the actual feeding value of the Norway oats, Mr. Trabue, or some other equally correct observer and *weigher*, should feed it to hogs, and the same weight or measure of other (white) oats to another lot of hogs of the same age and condition. There are no such experiments known to me; but, perhaps, there are some amongst the large audience of the *Journal* who can furnish reliable and accurate data on this point.

Last spring I cautioned my neighbors against going into the Norway oats speculation, and I am not sorry that I did. Few will be found willing to pay a dollar a bushel in the spring of 1871.

Supervisor Presbrey Again.

Supervisor Presbrey, of Virginia, makes the following report: The collections from manufactured tobacco in Virginia for the year ending June 30, 1870, amounted to $4,146,077 65, a gain over the previous fiscal year of $2,643,393 54, an increase of nearly 180 per cent. The total revenue from the same source collected by tax paid tobacco stamps, for sixteen months, from March 1, 1868, under the present administration, amounted to $5,114,521 78, while the collections from the same source for the fiscal years, 1866, 1867, 1868, and eight months of 1869, amounted to $1,440,120 51; showing $3,674,401 27 more collected in the past sixteen months than was collected in the previous forty-four months. In addition to the taxes collected from tobacco during the last sixteen months, there were shipped in bond for export and for withdrawal for consumption in other markets outside of the State, 53,159,935 pounds, the tax upon which, if credited to Virginia, would show a contribution during the period above named, to the national treasury of over eight million dollars. The prospects of the new tobacco crop, and the general condition of the trade are hopeful, both to the planter and manufacturer, and warrant the expectation of a still larger revenue during the present fiscal year.—*Tobacco Leaf.*

How to Escape Tobacco Worms.

Every person who lives in a tobacco country knows how troublesome to planters the horn-worm is, and what labor it requires to destroy these insects and so prevent them from riddling the tobacco leaves as they ripen on the hill. Some of our North Carolina neighbors, we learn, have of late adopted an easy method of protecting their tobacco crops against this worm. They simply use a solution of cobalt (or fly-stone), to be had at all drug stores, which destroys the tobacco fly that lays the egg that hatches the worm. The common Jamestown weed, which vegetates everywhere, is allowed to grow in limited numbers in the tobacco grounds and in the fence corners, and the cobalt in a powdered state, mixed in a solution of honey-water, is dropped in the blossoms of the plant. As the tobacco-flies feed freely from the flowers of this weed, they imbibe the poison, which kills them almost instantaneously. We are told that where the specific is used the dead flies may be seen laid out on the ground far and near. Of course, the fly being dead, the egg is not laid, and the worm is not hatched.—*Tobacco Leaf.*

Miscellany.

We take the following from the *Rural Carolinian*, which will serve for an answer to a correspondent's question two months since:

WHO AND WHAT ARE "THE PATRONS OF HUSBANDRY?—"The Patrons of Husbandry" is the name of a secret organization, having, we are told, for its grand object "the elevation of the cultivator of the soil; the diffusion of intelligence; the exemplification of love and unity, and the enlistment of the sympathy and influence of woman in the work.

"The aim is to elevate the cultivator of the soil in his own estimation; to exhibit the true value and real position of himself and his family to society; to call out and secure unification to his action; and to give that power in *fact* that they are entitled to from *numbers;* to interpose harmonious influences so as to prevent our sons and daughters from fleeing from their rural homes as from a curse, and seeking more congenial associations in city life; to organize the action of the agricultural population, so as to give effect to their influence and make them be felt as a power in the land—alike for their own and the nation's benefit; to form them into a threefold cord of unity, love, and intelligence, instead of being, as at present, a useless, powerless, *rope of sand.*

The subordinate Granges have four degrees:

First—Laborer (male); Maid (female.) Second—Cultivator (male); Shepherdess (female.) Third—Harvester (male); Gleaner (female.) Fourth—Husbandman (male); Matron (female.)

State Grange.—Fifth—Pomona (Hope.)

National Grange.—Sixth—Flora (Charity.)

Senate—Seventh—Ceres (Faith.)"

Religious or political discussions are not tolerated in the work of the Order, and no political or religious tests for membership are applied. Any person engaged in agricultural pursuits, of the age of sixteen years (female) and eighteen years (male) may become a member. The Order is spreading rapidly, especially in the West, and will not be long in making its power felt for good.

ONE WAY OF IMPROVING LAND.—It perhaps has occurred but to few farmers to employ the roving herds of summer at manure-making. It may be done thus:

Select a spot adjoining an outside fence, and enclose it well on the three remaining sides. Haul leaves from the woods, muck from ponds or swamps, or anything that will rot into a good manure in ten or twelve months, and spread over this lot three or four inches

deep. If there are not several trees in this lot, make shelters for shade by placing poles upon forks, putting a floor of rails across these poles, and cover thickly with pine-tags. Enclose large pieces of ground alum salt in boxes having a hole in their tops large enough for cattle to get their tongues in conveniently. Place these boxes firmly upon posts about over the lot. Make a gap in the outside fence that everybody's cattle that come along may walk in. As soon as they find out the salt, this lot will become a grand congregating place for all the cattle of the vicinity—a perfect camp-ground of the bovine species. They will make the shelters their resting place by day and by night, and will continue to come so long as the supply of salt (which must be added to occasionally) holds out. Of course they will drop their manure here; and by winter you will have the satisfaction of owning at least one lot that has been well manured at small expense. So long as cattle run at large, we think it right that *somebody* should have the benefit of the manure if they can get it. What objection, friend?—*B. W. Jones, in Rural Carolinian.*

The Cheltenham Sewage Farm.—The Cheltenham (England) Commissioners have recently completed works, and purchased a farm for the disposal of the town sewage by irrigation. The first yearly letting of the irrigated land was effected by auction recently. The land is all ordinary grass land, to which, as yet, the sewage is but imperfectly applied, and comprises 119 acres. It was divided into six lots, which let at prices varying from £5 18s. to £8 13s. per acre, and realized a total of nearly £900. The yearly cost to the town for interest and re-payment of loan in thirty years is £1,000; so that, if the rent of the land should remain stationary, the town would only be put to a cost of £200 a year, and own the farm free at the end of thirty years, as against an expense of nearly a £1,000 a year before incurred, with very unsatisfactory results for deodorizing. But, in addition to the rent of the land, the Commissioners apply the sewage to adjacent farms, at a certain charge per acre, and have reserved for experiment several acres of their own land, which have been broken up for rye-grass, and are expected to realize a profit of at least £20 an acre; so that the farm will probably be conducted without loss, even during the first year.—*Prairie Farmer.*

Alsike Clover.—The quantity of seed required per acre is five pounds, when sown clear; and about half that amount when sown with timothy.

It should be sown in the spring with wheat or barley, precisely in the same manner as red clover.

When allowed to ripen its seed, it cannot be cut more than once in a season, as it bears its seed with the first blossom in each year; but if it is grown for a hay crop, it can be cut again in the fall, and will yield a nice lot of fine hay for calves and sheep.

Its effect on the ground is nearly the same as that of ordinary red clover, and perhaps is still more paralleled by the small white clover.

The most prominent advantages of the Alsike clover over the common red variety, are that it does not heave out of the ground in spring with the frost, and consequently it can be sown on damp ground with good results. It makes finer and better hay, for the stalks are not so thick and woody as those of red clover. It yields about one-third more seed to the acre, and when threshed, the hay makes excellent feed for calves and sheep. Among its disadvantages may be reckoned its rank growth, rendering it liable to be lodged.—*Canada Farmer.*

Mr. Warren Leland, of New York, says: "The usual way of constructing outlets of ice-ponds is by an overflow at the surface. In this way the top of the water is always in motion; and after ice has formed, the warm water from springs and underdrain, flowing along its under surface, prevents its thickening. To obviate these difficulties, the outlet should be from the bottom of the pond—leaving the surface undisturbed to cool and freeze more readily, by the cold air and action of the ice. This style of outlet also tends to keep the water free from sediment. It is easily constructed, by having an iron or wooden tube leading directly from the bottom of the pond, or by a flume, arranged to draw from the bottom. Having in this way doubled the thickness of ice on my pond, I wish, through your columns, to give my brother farmers the benefit of my experience."

Destroying Stumps.—A little excavation is made under the stump, between two of the large roots, some combustible material put in, and then set on fire. Previous to this, however, some dry materials should be piled around the root, above the surface of the ground, and covered over with a compact layer of turf, forming a sort of coal pit. It has been found, upon experiment, that the stumps will burn in this way a number of days, with a sort of subterranean fire; and when the turf falls in, nearly all of the root is found consumed below and above the surface of the ground.

The hole left by the consumed stump will be found to contain a quantity of ashes, charred wood, burnt earth, &c., all valuable fertilizers—a part of which may be thrown out for use elsewhere, and the crater or hole then filled up to the level with fresh turf or earth.—*South Land.*

Cart Bodies.—I see every season, men who call themselves prudent and saving, tip up their carts, and confine them in an inclined position by a heavy chain and block at the front part. Now, an iron sword costs about one dollar. With it the cart can be tilted to any desired angle. In laying out manure, half the labor is saved by using this convenience.

I could never understand why farmers should use narrow cart bodies. Why should not the sides of the cart come out to the wheels? Mine do—I want a large cart body—it is convenient for loading everything. Loads of dirt need not be filled so high. Then if you want to load barrels of produce, a smaller cart body than mine will not hold a horse-load. I can carry nine barrels. Every cart body should have two sets of side boards—if they are fitted conveniently, their use will greatly facilitate farm work.—*Cor. Germantown Telegraph.*

Grain Produce of the World.—The following statistics were compiled by S. B. Ruggles and G. S. Hazard, connected with the U. S. Commission to the Paris Universal Exhibition of 1870:

	Bushels.
Russia	1,358,437,500
Finland and Poland	125,000,000
Germany	737,703,774
France	710,669,279
Austria	486,092,000
Great Britain and Ireland	355,053,389
Sweden and No.way	62,000,000
Denmark	23,500,000
Holland	36,725,900
Belgium	64,297,692
Switzerland	17,200,000
Portugal	29,503,367
Spain	120,000,000
Italy	187,247,957
Greece	9,300,000
Roumania and Servia	150,000,000
European Turkey	110,000,000
United States, 1860	1,221,428,453

The above estimate represents all cereals, wheat, rye, oats, barley,

corn, etc., but does not include rice. The United States census for 1870 will undoubtedly carry our grain capacity up to or over 2,000,000,000 bushels.—*Exchange.*

Harness.—Every part of the harness should fit. It should be kept both clean and soft. Frequently the collar becomes covered with a compound of dirt and sweat, which makes it uneven, and should be looked after as often as necessary. When the harness gets wet, hang it on several pins instead of one, so that it will not curl out of shape when drving. Always grease or oil after wetting, and before it is quite dry, if you would preserve the leather and make the harness easy for the animal. A harness that is cared for will last three or four times as long as one that is neglected. Use Neat's-foot oil, and always keep a greasy wollen cloth to wipe and rub harness with.—*Hearth and Home.*

Traction Engine.—A committee was appointed by the Farmer's Club of the American Institute to examine and report upon the working of the Thompson road locomotive, and a majority of the committee agreed in a very favorable opinion of its capacity to take the place of horse power on a uniform and moderately hard surface, and thought that it came *very near* performing the work of plowing successfully—that with some modifications the great desideratum would be reached. One gentleman, Mr. Whitney dissented from this report, and does not believe that an engine moving along and drawing a gang of plows can ever be made to work profitably or satisfactorily.

Sumac.—It has several times recently been suggested that sumac may be profitably cultivated. At present prices there is little doubt that it would pay much better than wheat. It is readily propagated from seed and, may be, more rapidly from root cuttings. It would not certainly involve much cost to make the experiment on a small scale, and it is hoped that some one will begin this winter, and as soon as possible give the public the benefit of his experience.

Fall Rye.—There is, perhaps, no crop that pays better, if the ground is fenced so that it can be pastured, than fall rye. Unlike wheat, the more it is pastured the better it seems to thrive, and the better the yield of grain. But, for pasture in late fall and early spring, it is a crop that will pay any farmer to cultivate, sown as late as the middle or last of November; and it will afford fair pasture in spring, long before the grass can be pastured. The grain allowed to ripen and "hogged down," it seeds itself, making another

crop for spring and fall pasturage. It would be well for our farmers to pay more attention to rye as a farm crop.—*Kan. Far.*

Big Things.—A Mississippi gentleman, says the *Practical Planter*, sowed on a Texas ranch fourteen hundred bushels of California burr clover seed.

Advantages of Salting the Manure Heap.

[Translated from "*La Semaine Agricole*," in *Journal of Agriculture.*]

In the spring, when the heap begins to ferment; or in the summer, when the horses are kept up, ammoniacal gas and carbonic acid begin to escape. This is detected by means of an odor altogether peculiar to itself, well known to all those who have once remarked it. This evaporation must be stopped by any and all means, for ammonia is one of the most active ingredients of manure, and should be retained until the compost is applied to the soil.

To succeed in doing this, many cheap articles may be made use of. A few handfuls of common plaster may, from time to time, be thrown upon the heap; this will absorb the ammonia as it is evolved, and thus hinder it from escaping into the surrounding atmosphere. Common salt may also be used to much advantage. One excellent means of applying it is, to dissolve four pounds of salt in a bucket of water, and then sprinkle it by means of a watering pot upon the manure heap.

Here is the explanation: Common salt is composed of muriatic acid and soda. The ammonia of the manure unites with the muriatic acid of the salt and forms a muriate of ammonia, sometimes called sal-ammoniac. This salt is neither gaseous nor volatile, consequently is fixed in the manure until the plants appropriate it to their own subsistence. The soda, after having been separated from the muriatic acid of the salt, unites with the carbonic acid of the manure and thus forms the carbonate of soda, which, like the muriate of ammonia, remains in the manure until vegetation eagerly seizes hold of it.

DIAGRAM.

Common salt	Muriatic acid + Soda	Muriate of Ammonia.
Manure heap in a state of decompos'n.	Ammonia + Carbonic Acid	Carbonate of Soda.

As is readily seen, this is a very simple method, easy of execu-

tion, cheap, and effectual in retaining the volatile particles of the compost and in giving them their greatest value.

Farmers, when your manure heaps begin to heat, do not neglect to spread upon them several handfuls of plaster; or, failing in that, water them with salt water. You will be rewarded for your slight labor by incalculable profit. Do this and get your neighbors to do it. R.

From the Southern Cultivator.

Table for the Equal Distribution of Commercial Manures.

In preparing this table, the acre has been reduced to *yards of row*. Taking the three usual widths of rows in which cotton is planted in the Southern States, we find that rows 3 feet apart will give 70 rows very nearly to the acre, and 4,900 yards running measure.

Three and a half feet will give 60 rows to the acre, and 4,200 yards, running measure.

Four feet will give 52 rows to the acre, and 3,640 yards, running measure.

The table is laid out for the number of pounds per hundred yards of row, and hence the shape of the land will not affect the results:

Rows 3 feet		Rows 3½ feet		Rows 4 feet		Rows 4 feet 1½ in.	
Pounds per 100 yards.	Pounds per acre.	Pounds per 100 yards.	Pounds per acre.	Pounds per 100 yards.	Pounds per acre.	Pounds per 100 yards.	Pounds per acre.
1	49	1	42	1	36½	1	35
2	98	2	84	2	73	2	70
3	147	3	126	3	109	3	105
4	196	4	168	4	146	4	140
5	245	5	210	5	182	5	175
6	294	6	252	6	218	6	210
7	343	7	294	7	255	7	245
8	392	8	336	8	291	8	280
9	441	9	378	9	328	9	315
10	490	10	420	10	364	10	350

POTASH FROM WOOL.—One of the most interesting among recent practical applications is the method of extracting potash from the yolk of wool fleeces, which from this source for some time past has been obtained in great purity. It is computed that if all the fleeces of all the sheep of France, estimated at 47,000,000, were subjected

to the new treatment, France would derive from this source alone all the potash she requires in the arts, enough to make about 12,000 tons of commercial carbonate potash, convertible into 17,500 tons of saltpetre, which would charge 1,870,000,000 cartridges. So that the inoffensive sheep, the emblem of peace can be made to supply the chief muniment of war. The obvious lesson from these facts, to the sheep farmer, is to wash his fleeces at home in such a manner that the wash waters, so rich in potash, may be distributed upon the land as liquid manure.—*Am. Artisan.*

[This matter is now receiving the attention of Prof. J. W. Mallet, of the University of Virginia, from whom we shall probably have the result of his interesting experiments.—Ed.]

Inferior Stock.

One thing is certain, that if we sell or slaughter our best mares, cows, ewes or sows, and thus cut off all hope of any improvement at one blow, our stock must continue to be poor and inferior. Does a heifer show any disposition to fatten easily? She is encouraged to feed until fat, and is then sold and eaten, while her fellows, who belong to the same breed with Pharoah's lean kine, are kept for milk or rearing calves, because they are not and cannot be made fat for the butcher. Has a farmer a sow pig which becomes fat upon the feed on which the rest of his pigs are starving? He gives her over to the butcher's knife and propagates from "land shads" and corn-cribs. Has he a fine, round, bright-eyed ewe? She will be fat about the time his half filled pork barrels are empty and she is stripped of her fair skin and fair proportions simply because she is worth the trouble of killing; and thus many of our farmers perpetuate a breed of animals that are a disgrace to the country. They seem uneasy while they possess an animal that will draw the attention of their neighbors or the butchers, and woe be to it if it put on a better appearance than its fellows, for from that time its doom is sealed. To improve the breed of animals, it is by no means necessary to incur a great expense in bringing animals from a distance. If a farmer will mount his horse and ride across the country some fine day, and view the live stock of his neighbors, he will soon perceive that there are abundant means of bettering his circumstances by a cross or exchange at a slight cost, and he by this plan is improving his judgment by comparison, and hoarding up experience for a future day that will be of more value to him than the expense of

many such excursions; and improvements once begun and persisted in for a short time, will produce such a corresponding improvement in the mind and circumstances of the farmer as will ensure its continuation, and richly reward all his labor and outlay.

Many farmers destroy the hope of improving their stock by a system of false economy in the selections of the males from which to breed their stock; many do not keep a male from which to breed their horses or horned stock, nor is it necessary, as one will do for a neighborhood; but this one should be the best; and in order to keep a good one, a good price must and *should* be charged for his services. Many farmers loose thirty and even fifty dollars in the value of a full grown horse, steer, ox or cow, by a system of false economy—by not being willing to pay two or three dollars more for the services of a male. I have repeatedly driven my cows three miles to a good male, at the cost of four or five dollars, when I could have found a male on my neighbor's farm at a cost of twenty-five cents.—*Germantown Telegraph.*

Harness for Heavy Draft.—Durability is the main consideration to be borne in mind in making up harness for heavy team work, but it is not necessary to load down the horse to secure this result. A harness may be light but yet strong; not a single strap should be used more than is necessary to secure strength. It would be extremely difficult for any one to give a good reason for using the heavy cart harness; the heavy breeching and collar are of themselves all the load a horse should carry on a hot day. The shafts being attached to the collar relieves the back, but at the cost of immense strain upon the shoulders. Certain parts of the harness have to bear the greater proportion of the strain, while the other portions only serve as supports. The trace, hames and hame straps on all team harness bear the principal part of the strain, and the size should be proportioned to the work to be done.

"A trace made of oak-tanned ox-hide will, if tanned and finished in the best manner, safely resist a strain of 259 pounds to the square inch. A team trace, therefore, two inches wide and double thickness, can be relied on to sustain a strain of 1,000 pounds. Additional experiments have shown that when two thicknesses of this leather are pasted and stitched, with twelve stitches to the inch, its strength is increased about thirty per cent.; but taking the minimum strength, this sized trace on a team is capable of starting a load of two tons weight, which is all any team of horses should ever

be called upon to draw. In connection with this, use a chain made of 3-16 wire, its actual strength is double that of the trace, but the wear necessitates the additional strength. The hame rings or draft eyes as well as the trace clip should be a little heavier, but there is on necessity of their being of ½ inch round iron as we often see them."—*Harness Journal.*

Feeding Horses too much Hay.—Of all our domestic animals there are none that require more systematic care in feeding than the horse. A horse should be fed regularly and in moderate amount, and when worked he should be worked judiciously. A horse fed in this way may be kept at a moderate cost, and will be more healthy and perform more labor than if fed highly, or as high as many we know are in the habit of feeding their horses. Horses will certainly eat hay enough to injure them if they can get it. When hay is kept constantly before them, horses are apt to spend their time in throwing it around topsy-turvy in the rack; they soon become dissatisfied with their food, and lose their usual keen relish for it. The general practice should be to feed regularly three times a day.—*Rural American.*

Scratches in Horses.—The following ointment is claimed to be a sure cure:

"Take four ounces ointment of rosin, one half ounce finely ground verdigris, two ounces turpentine, one-half ounce oil of organum, one-half ounce tincture of iodine, one and one-half pounds of mutton tallow. Mix all well together. Wash the foot clean with castile soap and soft water, and apply the ointment after the foot become dry. Once a day will be sufficient to apply the ointment.—*Exchange.*

The Scarcity of Meat—Profitable Operations.

It is certain that for years to come, meats in this country must rule high. There is no possible source of supply adequate to the regular demand, which beyond peradventure will prevail. Should any disturbance in our national affairs likely to result in war occur, or be so seriously threatened as to induce the federal government to put our national forces on a war footing, meats of all kinds would surely go up out of sight, except to the wealthy. Even now it is

Texas alone which enables the poor man to give his family a taste of beef.

In regard to pork, if it were not for the prevalence of hog cholera, the crop could be largely and rapidly increased. But the ravages of that disease have, of late, fully compensated for the prolific breeding of the stock; and so far as we may judge, are likely to continue to do so indefinitely. No breed, no locality, is secure against attack.

As for mutton, the stock of good mutton sheep never has been large. The Merinos are now so reduced in numbers that no great reliance can be placed on them for meat supply, except, perhaps, in in the following manner:

It is known to most if not all our readers, that the farmers in the eastern counties of New York have long derived a handsome profit from the purchase of strong, healthy, common ewes in the fall; breeding them early to the Southdown or long wool mutton rams, and selling the following season in the New York market the lambs and such of the ewes as reach a marketable condition. There seems to be nothing to prevent Western farmers, large or small, doing the same thing. A Southdown or Cotswold ram to a grade Merino or common ewe will give a lamb which dropped in April, may be sold in the Chicago, St. Louis or Cincinatti market in July or August for four or six dollars.

Corn, of which the West never produced so much in any previous year must rule low. Twenty to thirty cents per bushel, within 200 miles of this city, is now the range of price for this great staple; and, unless the distillers double their capacity and run full time, there is not likely to be any great improvement in price.

Aside from the direct profit to be realized in an operation of this sort, those who are so inclined may reserve their best half-bred ewe lambs as the basis of a flock. It will be easy in this manner to obtain any desirable number of sheep, whose wool will be more valuable than a finer staple, and whose carcasses will always command full rates in the market.

To those farmers to whom the principle markets are easy of access, we know of no disposition they can make of a portion of the surplus corn crop, promising better remuneration than feeding it to ewes in lamb and to mutton rams.

With all the rush of sheep on the markets of the country for the past three years, good mutton has been uniformly scarce and dear.—*Nat. Live Stock Journal.*

How English Beef is Fattened.

The Englishman is proverbial in his quality and love for roast beef. No such "roasts" are found anywhere else in the world. The *modus operandi* of its best production is as follows:—A pit is dug, generally about six feet deep and ten square, into which the animal to be fatted is lowered. It is then supplied with all the roots, hay and meal it can digest, and furnished with the needful quantity of water, as well as with an abundance of dry straw litter. The droppings are trampled under the foot by animal as he moves about hisn arrow cell, and gradually by their accumulation, rise to a level with the surface of the ground. When the surface is thus reached he is ready for the knife, and yields a rich and most juicy flesh, besides many tons of the best of manure firmly packed in the pit.

One great trouble with the American beef is, that the animals get too much exercise. Even our stall fed animals are allowed to roam too much. But the worst feature of all is the fact that nearly all the beef which is found in the markets of our great cities is driven thither on foot, and killed without rest or recuperation, and of course in a diseased state. The animals transported by rail are but little if any better, as the motion of the cars, even for a few hours, is extremely weakening and debilitating on an animal heavy with fat. Perfect quiet and good ventilation is essential to good beef.

When a bullock is taken from its pasture and placed in a stall or pit, it continues to grow in bone and in muscle or red flesh as well as to accumulate fat, and the fatty matter is so blended with the muscular as to make the latter tender, juicy and highly flavored.

In fattening, as a general thing, American cattle move too much and hogs too little. The hog needs more exercise while fattening, than a bullock—or at least the evil effects of driving is not so perceptible as in driving cattle. Kentucky hogs driven across the mountains into Virginia, are said to give sweeter flesh and more highly flavored hams than corn fed hogs pen fattened in Virginia.—*Scientific Press.*

Cattle Cars.—Cars made expressly for the transportation of cattle have been recently invented, having appliances for feeding and watering on the route, and providing for their comfort on the journey, so that there is no necessity for unloading even in very long distances. Humanity required something of this kind and it was also necessary that our meat may be in a healthy condition when received.

Improve Your Sheep.

Most men who breed sheep are accustomed to isolate the rams about the first of August, and return them to the flock again about the first of November, or later as the latitude may determine.

Through the middle tier of States, the first of April is probably the best time for spring lambs. The mothers need green food as soon as may be after their young are dropped, and that is generally ready from the 20th of the month to the first of May. Further north, the middle of the month is early enough, as the weather is colder and the starting of the grass much more backward.

To keep the flock constantly improving, the first necessity is to

CHANGE BUCKS FREQUENTLY.

We would suggest every year, if it is posible, to make a selection from a foreign flock that shall equal your own. Another way is to hire a thoroughbred ram at any resonable cost and thereby introduce into your flock blood that will improve it, always keeping in mind, when the selection of a sire is made, what you propose to do with the progeny that shall come from this animal. One whose aim is to get early and good lambs for market would not introduce merino blood, or if he wanted fine wool, neither a Cotswold nor Southdown.

Not less in importance is

BREEDING FROM THE BEST EWES.

Any flock of sheep will deteriorate unless the best are saved for breeders. Seven seasons are enough for even the best of sheep to be used for mothers. After nine years old, they loose so much of their vitality and their milk-producing qualities, that the lambs are generally below the average. As soon as the lambs are weaned which should be by the middle of September, if they were born the middle of April—all the ewe sheep in the flock that are not of suitable age, and of suitable form, and of suitable health for mothers, should be taken out, and in some way be disposed of. They can generally be fattened in the fall or early winter, and either sold to the butchers, or if the number is not too large, can be consumed in the family, in lieu of more salable but not more nutritious meats.

The place of these thus discarded should be always filled from the best of the lambs, if it is desirable to keep the flock about the same size. Hundreds of farmers who sell early lambs are guilty of the folly of selling the best and allowing those that will not sell to go through the winter and eventually become mothers. This would

seem to be a saving, but it is instead suicide. When the best are saved for breeders, the flock is constantly improving; when the poorest are permitted to become such, there is a gradual deterioration, and an ultimate (to use an expressive phrase) running out.

No farmer is worthy the name and age who is not always on the alert to make both his farm and the stock upon it better. It does not require capital to do this so much as it does care, and in the end the best farming and the best stock-raising pay the best; and to the bottom line all eventually comes.—*Hearth and Home.*

The Angora Goat.

Mr. Editor.—The agricultural journals all over the country are talking about the Angora goats, but their statements are so diverse that it is difficult to get at the truth. Some tell us that the wool or hair sells for $1 and $1 25 a pound, and that it is much in demand, while others say that no market can be found for it in this country. Which is right? If it would be profitable, I would like to give them a trial, but if the hair could not be sold, it would be folly to undertake it. I hope you may be able to give us some reliable information. H. A. M.

[We regret that we cannot speak with certainty about the Angora goat. Sometime since a Mr. Eutychides stated to the N. Y. Farmers club that he would give a certain price per lb. (we think it was $1) for all the hair that was offered. And Mr. Robert W. Scott of Kentucky, says in his stock pamphlet that it is used in this country and has a specific market value.—Ed]

Artichokes Again.

The Jerusalem artichoke has been so persistently called a pest, that the fact has been overlooked that it is most excellent feed for hogs. The principal objection alledged against them is the difficulty of getting rid of them; but this is really no objection, for if plowed up in the spring, just after the young stalks have come up, and the ground cultivated in a summer crop, they will entirely disappear. The old tuber dies when the stalk puts up, and new ones are not formed until the fall. The yield per acre is immense—they are fully as nutritious as potatoes—there is no expense in harvesting them, as the hogs root for them eagerly, and there is no cost for seed or planting, as they reproduce themselves from every little scrap that is left in the ground. The land upon which they are grown and fed will improve year by year, and it is only necessary

to plow deeply in the winter or early spring, and harrow the ground level. A small experiment will convince any hog-raiser that it is very convenient to have a patch of artichokes upon which to turn his hogs that are to be kept over after they have been removed from the clover fields.

Shelter for Hogs.—Having noticed several articles, and some of them accompanied with drawings and plans for sheltering hogs, I will give you my method. I have lived in northern Illinois for over twenty years, and had some experience in wintering stock of all kinds. My plan for a hog shelter is simple and satisfactory, at least to myself. It is proper to remark that I live on the east side of a grove. I take two forked posts and set them in the ground, leaving them about four feet above the surface; next, I put on a ridge pole, and then get some pieces of plank or scantling, or slabs six or seven feet long, and set them slanting from the ground on each side, and let the ends meet on the ridge pole; cover them with straw or anything that will not let the dirt fall through, and then put a thick covering over this, of earth. I dig a trench around this shelter, to keep out water. The shelter should face the south or east, and be ventilated about the middle. For this purpose I use a small piece of stove pipe.

In the fall, I gather up forest leaves and fill it up. The hogs work them up among the dry earth and form a dust. This is all they want. In the coldest weather they will come out dry and comfortable.

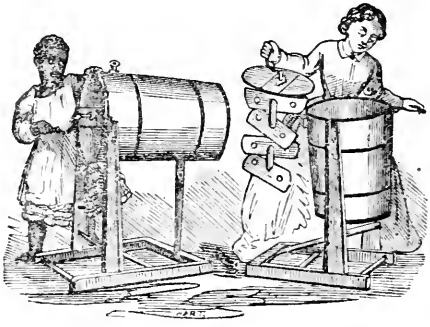
I have tried different ways of wintering hogs, but have found nothing yet equal to this plan.—*Cor. West. Rural.*

Remedy for Hog Lice.—I herewith send you a remedy for hog lice, that will prove, on trial, infallible. Procure some leaf tobacco, boil to a strong amber, in water enough to float it; mix in while hot enough lard or refuse grease to make a thin salve; rub on the pigs or hogs troubled, and in less than twenty-four hours they will not have a louse on them, if well rubbed. Also put enough leaf tobacco in their beds to make them smell strong, and the hogs will never be troubled with lice again while they sleep in the beds. The tobacco will not hurt pigs in any respect, even if but a day old.—*Rural N. Yorker.*

In Italy is an olive tree which is known to be over 700 years old.

Mechanic Arts.

Churns for Families and Dairymen.



TINGLEY'S PATENT IMPROVED CHURN.

In the last number of the *Planter and Farmer*, a correspondent, after stating what is required of a churn to meet the necessities of those who wish to make good butter, inquires, what churn shall we use, "will the Tingley answer." To decide which is the best churn, for all purposes among the tens of thousands which have been invented, would be a difficult, if not impossible task; but from observation, and the experience of many successful butter-makers, we are satisfied that the Tingley is one of the best churns ever sold in the South.

For convenience, durability, and cheapness, it is unsurpassed—we copy from a printed description a few of the advantages it possesses—

1st. It is the "old barrel churn," while, at the same time, it can be as readily cleaned as a common tub.

2d. In facilities for cleaning—as we remove the entire head and dasher in an instant, when it can be thoroughly cleaned in every part, and left open, when not in actual use, for ventilation by fresh air.

3d. The dasher is one of the best points in the churn—the blades being placed on the shaft at an angle of 90 degrees from a line, and in opposite directions, throws the cream to the right and left lengthwise of the churn; the propulsion endwise bearing upon the shaft, and not upon the hand of the operator, thereby lessening the labor of churning nearly one-half.

4th. By this improved dash, good, sweet, solid butter has been made in from *ten* to *twenty* minutes; while by simply drooping the

churn to an upright position, and turning the dasher on an angle of 90 degrees, back and forth, the butter will be collected into one solid lump while in the milk. All good butter-makers will appreciate this.

Mechanical Recreation.

The purpose of this article is to show that mechanical employments furnish the most healthful and delightful recreations for such as are not constantly employed in them.

The purpose of recreation is as the term implies, to re-create or renew the exhausted energies of mind and body. Perfect rest, such as is secured by good, sound, refreshing sleep, is, of all the means by which this is accomplished, the most powerful.

It is true, food is the fuel by which the human engine runs and does work, but the analogy between a machine constructed of lifeless material, and the animal economy ceases when we consider anything beyond the mechanical power of muscular movement derived from the consumption of food.

The human machine includes within itself a directing power, which wearies and wears, and cannot be continuously employed in a single direction without fatigue.

The wise Solomon said that much study is a weariness to the flesh. And modern physiologists have not failed to see that undue manual labor impoverishes and enfeebles the mind.

The will concentrated long upon compelling the muscles to perform a certain routine of movement, finds itself powerless to command. It must then cease exertion entirely, as in sleep, or it must exert itself in some new direction. This is what is commonly called recreation, that is, an occupation which affords an agreeable contrast to that which has caused fatigue.

We think it indisputable, that any employment which exacts moderate muscular activity, at the same time interesting the mind by employing its power upon such topics as do not arouse the animal passions, while they moderately engage the higher mental power, has in it all the elements of healthy recreation. In our opinion, nothing whatever combines these elements, and furnishes so cheaply the needed relief to professional men and hard students, as some mechanical operation, in which originality of design may be united with manual skill in execution.

In such recreation, the entire tendency is to gratefully relieve the mind, gently exercise and invigorate the body, and build up and

cultivate powers which cannot be developed to the moral hurt of the individual, but generally increase his intellectual stature.

In such occupations, the mind, wearied with business cares, or by much study, may revel in refreshing beauties of form, colors, and motion, and find the highest of all pleasures in the contemplation of the relation of simple causes to complex effects.

A man who has, in this way, attained to even moderate skill, may find his lathe a magical instrument by which he can clothe the rudest materials with forms of beauty, and gratify to the utmost that wonderful combination of faculties by which man most asserts his superiority over the brutes.

Imagination here finds, if not so wide a scope as in poetry or the fine arts, sufficient to give it ample employment, and to banish from the mind all evil thinking and day dreaming, which, to the young mind, is always hurtful, and sometimes fatal.

On this latter account, we recommend most earnestly mechanical recreation for the young. Let the boys build wind-mills and miniature dams. They soil their clothes, but how much better soiled garments than soiled minds. They may cut their fingers with the tools you permit them to employ, but you will find such wounds heal in less time than the foul ulcers of moral corruption.

Every man who can afford it, should supply his boys with tools, and a room where they may be used and cared for. A boy takes to tools as naturally as to green apples, or surreptitious and forbidden amusements; and ten to one, if he has a chance to develop his mechanical tastes and gratify them to their full extent, his tendencies to vicious courses will remain undeveloped. Such a result is enough to compensate for all the expense and trouble the indulgence we recommend would entail; while the chances that the early development of his constructive faculties may, in this mechanical age, be the means by which he may ultimately climb to fame and fortune are not very small.—*Scientific American.*

The ordinary teaching of our schools is making the naturally more intelligent young men fortune hunters. Let it be stopped in every school, in every home. We are not in want of presidents or governors; but we do want farmers, artisans, workers, men. Cannot the school committee, the teacher, and the parent devise some incentive to these?—*Exchange.*

One thousand three hundred dollars will put up a cheese factory for 100 cows; $500 more in vats and presses will make it answer for 200 cows.

Household Department.

Household.

BY MRS. A. M.

Another Christmas, with its wonted complement of family gatherings and merry-makings, has passed. The little ones begin to think of "next time;" but we of larger growth to whom life is a reality, are looking forward to the advent of the New Year with mingled feelings. The proper ordering of our little kingdom (for are we not wife and mother, and, consequently, queen of our home circle,) taxes our best energies. We all, in greeting the New Year, determined with our heavenly Father's help to improve upon the old. One pregnant source of annoyance to housekeepers now is the labor question. Is it not almost time for the strong minds of the land to help us find some solution of this difficulty?

January, however, is the housekeeper's most restful month, though it too brings its cares and duties. Now is the time for getting ready the cold-frames, if you wish for a supply of those beautiful scarlet radishes for your tea table and the crisp heads of spring lettuce for your dinner table. Planted in frames in this month you will have a seasonable supply of Early Yorks with your spring chickens, and most probably during the latter part of the month you will find an open spell of weather which will give you time to plant a few rows of peas and potatoes. No after plantings are so acceptable to the household as those in early spring.

It is not generally known that our stock of preserves can be added to if we have the cucumbers in brine. We can make not only a beautiful but very palatable dish therefrom—the receipt given me by an experienced housekeeper, is as follows: Lay the cucumbers in salt and water for nine days; then green; after cleaning out the inside of the cucumbers thoroughly, lay them in fresh water until the brine is extracted (two or three days will be sufficient; they are then ready to fill, which must be done with lemon peel cut in shreds, mace, a small quantity of citron, and very small cucumbers. The syrup is made one pound of best white sugar to one pound of cucumbers. The addition of a small quantity of green ginger is a great improvement. They must be boiled after filling for half an hour, or until they look clear.

Another receipt, from the same source, which I have tried and

like, is transparent pudding: One pound sugar (white), one pound of butter, and fourteen eggs—leaving out three whites; the butter creamed, and the eggs and sugar put in by degrees. *Baked in a rich paste.* The above pudding is delightful, but requires a larger quantity of both butter and eggs than persons in the city generally find it convenient to spare; so I will give you a simpler receipt, but one which I am sure you would enjoy.

COTTAGE PUDDING.—Beat together three tablespoonfuls of butter, one cup of white sugar, and one egg. Add one pint flour with two small teaspoonfuls cream of tartar, sifted in the flour. Add, lastly, one teacupful of sweet milk with a teaspoonful of soda. Bake one hour. For sauce, beat to a perfect cream two cups of sugar and three-fourths of a cup of butter; then add, by teaspoonfuls, one cup of common wine.

Dairy.

COST OF A SMALL CHEESE FACTORY.— *Mr. Editor*—According to your request, I will briefly answer Mr. H. M. Fales, in regard to the probable cost of a small cheese factory. The tendency now is to small factories. They are built less expensively than formerly, and mostly by stock companies—the patrons that furnish the milk taking most of the stock. For 100 cows, a building 60 by 26 feet, with 16 feet posts, making it two stories, would be required. Take 24 feet from the lower story for a "make-room," leaving the remainder and the upper story for "curing-rooms." The upper story should be partitioned the same as the lower. The 24 feet room over the make-room should be plastered and furnished with stoves suitable for curing early and late cheese. The cost depends upon the price of lumber and labor, which differ in localities. A rough, substantial building, which will answer in every respect in most localities, would cost $1,000. If finished with paint, etc., $1,300. It could be furnished with vat, tank, presses, hoops, scales, etc., for $300, making in all $1,300 for the rough building, and $1,600 for the finished one.

For 200 cows, the same sized building would answer. For vat and fixtures, $500, making in all $1,500 for rough, and 1,800 for finished building. This is the size of many that were built in this State this season.

Stock companies are formed by those interested taking one or more shares, which may be $50 or $100 each. A committee is

chosen by the shareholders, who superintend the building of the factory, hiring the help, etc.

A dairy of 100 cows can be managed by a man of experience, without additional help, who could be hired at from two to three dollars per day and board. For 200 cows he would want an additional hand, which might be a woman, and inexperienced

The question is often asked: How many cows must a factory number to pay? For an individual to build a factory to work up milk for others, at two dollars per hundred, which is the common price of making and furnishing the cheese all boxed and ready for market, he would want 300 cows or more to make it a paying business. As with an individual, so with a stock company, to make the stock pay good dividends. But by the plan given, the farmers build the factory themselves for the purpose of working up their own milk, which is a great saving to them over the old way, both in expense and quality of cheese. If the price named above will not pay as good interest as is just to the stockholders, the price of making should be advanced. As the patrons are the owners of the factory, they can always fix a price that will do justice to all parties.—*Cor. New England Farmer.*

Deep vs. Shallow Skimming.—From observation, I believe that too many butter-makers do not skim as deep or churn as much milk as they ought. I hear them say often that they don't like to get so much milk, or sour cream, in with cream. It is a common practice for most butter-makers to have a skimmer that is perforated with holes, that the milk may pass through into the pan from which the milk is being taken. If any one has a better reason for not skimming deeper, I shall be pleased to hear it, and herewith give my reason why I think we ought to skim deeper and churn more milk with the cream.

First, there are but few dairy houses so far away from the odors of the kitchen, swill-pail, or barrels, or some decaying vegetable matter, as to keep the cream from absorbing odors that injure the flavor of the butter; and the cream must first receive, or have these odors pass through it before they can reach the milk, as it is most exposed. The milk must therefore be most pure, and, if churned with the cream, will aid in taking up the odors from the butter. By churning only the cream, the dash of the churn must, as we think, injure the butter globules and make the butter salvy, as the friction

is more directly applied to them than would be the case if milk was mixed with the cream.

There are times when the milk sours before all the cream is up; yet the milk must be nearly, if not quite as good, from the same cow that is being fed the same feed, in a warm morning as it is in a cool morning. But we often get twice the amount of cream in the cool days that we do in the warm days, and the quality is better. Take, for instance, the 24th day of August, a hot sultry day, the cream hardly paid for the labor. Now, take the 26th of the same month, 1869, a good, cool day, that gave a nice yield of cream. Is it to be supposed that there is that difference in the milk produced from the same cows on those days, when the cows were fed in the same pasture, that there was in the amount of butter made from their milk by skimming the cream only? I have thought that when the milk is brought in in a heated condition, and placed in a warm room, that perhaps many of the butter globules were exploded by the heat, and that they mingle with the milk like alcohol with water, but to churn all the milk would be to get more butter. I have been using Dr. A. F. Jennings' patent milk pans this season—an excellent thing for cooling milk and saving labor.—*Cor. Mark Lane Express.*

How to Test the Richness of Milk.—Procure any long glass vessel—a cologne bottle or long phial. Take a narrow strip of paper, just the length from the neck to the bottom of the phial, and mark it off with one hundred lines at equal distances; or, if more convenient, and to obtain greater exactness, into fifty lines, and count each as two—and paste it upon the phial, so as to divide its length into a hundred equal parts. Fill it, to the highest mark, with milk fresh from the cow, and allow it to stand in a perpendicular position twenty-four hours. The number of spaces occupied by the cream will give you its exact percentage in the milk, without any guess work.—*Miss. Agriculturist.*

Blooded Poultry.

BY J. W. LEWELLEN.

The question is frequently asked, "Why do Northern men sometimes pay $200 per trio for Brahma poultry, when ordinary fowls may be had for one or two dollars?" We might answer by asking, "Why do intelligent men pay $500 per acre for superior lands, when others may be bought for $10?" But we prefer a more practical reply.

In Virginia the "hen fever," which raged so frightfully in Europe twenty-five years ago, has never prevailed to an alarming extent, and therefore the public mind has never been thoroughly directed to the subject of poultry cultivation and improvement as an item of domestic economy. Now and then a citizen would purchase an "improved strain," and introduce it in his neighborhood; but beyond this the public knew nothing, and the farmer had no inclination to look after chickens. His lambs, calves and pigs furnished his fresh meats, and if, occasionally, he needed a baked pullet or a roast duck, a few pounds of sugar and coffee, bartered with a poor neighbor, or his own servants, supplied his immediate demands, and he cared for no more.

With Northern gentlemen, a different spirit prevailed. Their farms were small and sterile—they had no slaves to rely upon—and economy, as well as improvement, being necessary, they took hold of the poultry question, as they do of all others, and have solved it to their satisfaction. They have discovered that an eight weeks' bird weighing three pounds, is more valuable than one of the same age weighing less than one pound, and therefore it is that they are willing to pay high prices for breeding stock, knowing that the first cost will return ten-fold. And this must be our future policy if we wish to succeed.

The late war was very destructive of poultry throughout Virginia. Soldiers had a wonderful attachment for chickens, and we suppose the fondness was reciprocated, as whole families, including the sitting hens, often accompanied them to camp, never to return. The result was, that the remaining stock, at the close of the war, was very inferior—not worth the effort to cultivate.

In 1868–'9, a writer in this journal urged the improvement of our poultry by the infusion of new blood, and succeeded in arousing some interest in the subject. His experience and mode of cultivation, started others to work, and the result was seen in the grand Poultry Exhibition made at the late State Fair.

"But," says Jones, "can we, in our impoverished condition, afford to pay ten or fifteen dollars for a trio of pure stock birds, with the continued depredations of freedmen staring us in the face?"

We answer, Yes! Build your henneries within easy range of buckshot, and don't hesitate to administer "blue pills," when night prowlers are discovered.

The advantages to be derived from blooded poultry are these: Four or five times as many eggs from them, the year round, as from our dwarfed and sickly dunghill stock—five times as much spring poultry—and ten times the pleasure in cultivation.

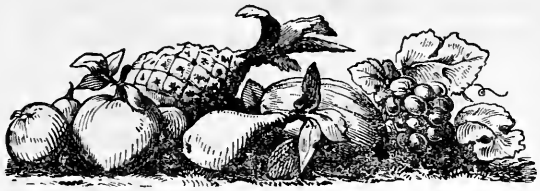
Our climate is all that need be desired for poultry raising. Our farmers have ample ranges for their birds. And the droppings, if cared for, will pay all the trouble and cost of feeding.

Let us, then, organize a Poultry Association, without delay, and by a free interchange of opinions, secure the advantages we so much need, in our efforts at economy and improvement.

Pure Brahmas.—It is always best, in selecting birds or ordering eggs, to purchase pure stock, even though you should have to pay more for it. Many Northern poulterers have their birds so mixed with Cochin, that it is difficult to tell which strain predominates. Where this mixture exists, the fowls are not as good layers, and generally become gouty at eighteen months of age. Pure Brahmas are more active and industrious than the mixed breed—have shorter legs and fuller breasts—require less feeding, and mature much earlier. Let poulterers select pure stock to breed from, and they will then have fine birds for table and for show.

Chicken Feed.—Good grain, such as corn, wheat and oats, is the best feed for chickens. In cold weather, warm dough, made of corn and oat meal, is excellent for their breakfast. At noon, soaked wheat makes a healthy feed; but for night, nothing is equal to corn, fed in whole grains or cracked. All fowls should be liberally supplied with raw vegetables, such as cabbage, turnip tops, lettuce or lucerne. Raw onions, occasionally, are greatly relished by them. A lit le meat in cold weather, once a week, is desirable, but not essential, as chickens properly housed and fed do very well without it. Too much meat is positively injurious, and should not be fed. Sound food, fresh water, comfortable quarters, and cleanliness, are essential to success in rearing poultry.

Breeding Poultry.—You cannot have fine fowls without giving them proper attention. Birds hatched this year and intended for breeders the next, should be well fed and housed. The males and females should have separate runs and lodging places until after Christmas, when they may be run together, five pullets with a two year old cock, and five hens with a cock of the present season, the males being in no wise related to the females. Where this plan is adopted, and the birds are well fed and housed, fine healthy fowls may be raised with very little trouble.



Horticultural Department.

Seeds.

There are few if any more prolific causes of failure to the market or amateur gardener than the use of worthless or indifferent seed. Year after year we hear the complaint from growers that this or that crop was lost to them, either by the failure of seed to germinate, or because it was untrue to name.

It is not unusual for us to hear that after great care in preparing soil, growing the plants and transplanting a crop of several thousand Flat Dutch Cabbage, for instance, the net result is a good supply of collards, or at best a fine crop of some inferior variety, and so with many of our most profitable vegetables. As we have often said much of the blame attaches to the growers themselves, who in their eargerness to secure so called cheap seeds, purchase from unreliable sources. In other instances the fault is with the seedsman, who for the sake of larger profits lays in a supply of low priced seed. The only remedy for the first of these is to be found in the bitter experience of those who try it. For the second time, which proves all things, is required to teach the public who to patronize, and to time and experience the cure must be committed. The present month is the proper one for our readers to procure their supply of seed for the spring, not that all or even a large portion will be needed at once, but there is more leisure time now to examine the stock on hand, and decide what is needed than will be had when the season for planting and sowing arrives. And there will be also an opportunity of examining the catalogues of different seedsmen, and selecting from such as offer the greatest inducements. All this may and should be done during the long winter nights, and then, when the spring opens it will only remain to prepare the soil and sow the seed already secured. We may be pardoned for again cautioning our readers from purchasing from

any but well known and reliable houses, since no amount of care or labor will compensate for bad seed, and this caution is only the more necessary the present season, because, in consequence of the wide spread drought of last year, added to the Franco-Prussian war, many of our leading seeds will be materially advanced in price and the temptation to purchase low priced seed will be unusually strong.

Irish potatoes, early cabbage, (French) salsify and other important seeds already show a marked advance in price, and the earlier purchasers will doubtless prove the more fortunate both as regards cost and quality.

Review of Pear Blight.

In the last edition of "Downings" fruits and fruit trees of America, we find the following foot note, page 650, at the conclusion of his remarks on pear blight. "Many theories and speculative opinions have been promulgated during the past twenty years since these remarks on blight were written, but so far as we can learn nothing conclusive is yet known. There are many persons holding the views here expressed, while others support a theory of atmospheric fungoid blight with equally good reasoning." It is not proposed here, to discuss at any length the local disease—blight or death of limbs and branches from insects. We have not only the scolytur pyri which punctures the limb, destroys its circulation, causing death from the punctured point to the extremity, but we have also a species of saw worm which coming from the oaks and persimmon trees, cut off branches of pear trees, a half inch or more in diameter. In a hundred or more cases of injury of this kind examined during the past two years, the writer does not recall an instance, where there was any disease or death of the branches below the local seat of injury. In quite a number of cases the *injury was quickly repaired* by whip grafting the injured branch the following spring.

Frozen sap blight, fire blight, the pear tree blight proper, is a formidable disease to pear growers, and about as much feared as the hospital gangrene was by the army surgeons during the late war. In explanation of the *frozen sap* theory as the cause of blight, it is necessary to glance at the course of the circulation. There are two currents in every tree, one crude sap rises through the (alburnum) outer wood to the finer branches and leaves for ex-

posure to the air; after which oxgenation, it becomes, like arterial blood, freighted with proper nourishment and descends now through the inner bark (liber) forming a deposit of new wood on its passage down.

Now the frozen sap theory requires a cold snap to catch the trees unprepared for it, with young, tender, unripened wood, produced either by excessive fall rains, second growth after dry summers, moist soils not well drained, warm autumn, stimulating manures or any other cause likely to induce this late growth.

The freezing of this wood injures the *vis vital* of the fluid sap, as it does the juices of our winter vegetables, and it is no longer physically or chemically adapted to the performance of its functions. All the symptoms of disease are exhibited, when the trees start into life the ensuing spring and the dead spots on the bark, in some instances, and rapid progress of the disease by the circulation in others, clearly indicates that there is poison in the fluid sap.

For a further description of the disease itself, your readers are refered to the work of Downing.

My own observations for several years past, have led me to think, that *frozen sap is* not the most prolific source of blight in Virginia, and the Southern States; however true it may be of the North. From the remarks which Mr. Downing makes under the head of "most successful remedies," I am disposed to think, that he too looks more to the nature and condition of the soil for the cause of blight, than to the freezing atmosphere. There is a very striking analogy between blight in the pear, and sundry forms of gangrene (frost blight) in the human system, and while doubtless, many cases of blight may be ascribed to external causes entirely, as a case of frost blight or insect blight; yet by far the larger, and more fatal cases proceed, like the senile or old man's gangrene from internal causes alone—the soil—independent even of any external cause, such as sap freezing, whatever. How else can we account for those cases of blight where there has been no cold sufficient to produce the freezing of the sap? In a moist soil where the roots of the tree, whether pear, apple, or almost any fruit tree, are exposed to stagnant moisture, poison will be generated, and its effects will be seen sooner or later. There may be even rapid growth and apparently vigorous health for a few years, followed by disease, blight and death without any freezing of wood. In a dwarf pear orchard of 5000 trees, the writer remembers to have seenthe wholesale slaughter of one square, containing a thousand trees from blight by allowing the ditches around the square to be filled up, and remain so during

a single year. These trees had borne several crops and the same season there was scarcely any blight in the adjoining well drained, well cultivated squares.

In many parts of our own State the most reckless disregard of hygiene as regards the health of pear trees, is constantly exhibited, and it is often difficult to persuade a farmer that a given piece of land is too wet for the health of trees, when it will grow moderately well ordinary annual farm crops. We often see articles in our horticultural journals advocating the most opposite opinions as to the management of pear trees to prevent blight. One party cultivates his ground and has blight, another escapes it by, *as he thinks*, growing the trees in sod, another relies on annual mulching the whole surface of the earth and no cultivation—pinching the shoots, pruning the roots, special fertilizers of ashes, bone dust, lime, cinders from the blacksmith shop, have their advocates. If the most prolific and fatal sources of blight are to be found in the condition of the soil, which I think is indirectly admitted even by Downing; then my impression is that our preventative remedies should be there applied in the proper *selection* of *soil* and *varieties adapted* to the locality. *Drainage and cultivation* of young trees induce growth, and promote health, (and judiciously planned,) well ripened wood every fall; and it would be difficult to persuade me that cultivation proper and timely, ever induced the disease blight.

After trees have attained size and age for bearing, we find them healthy and fruiting well for several years without cultivation, making, however, very little annual growth during bearing years. We find these trees more subject to insect blight during the years the orchard is uncultivated, and special care should be taken, however well the land may be drained by ditches, to throw it up in beds with trees in the centre, preparatory to its lying fallow or in clover.

It is true that we sometimes find blight attacking pear trees on hill sides and elevated situations, where apparently, that the locality was all that could be desired. In almost every instance of the kind which has fallen under my observation there had been no surface breaking and aeration of the surface soil for some years, and even with the surface drainings there was stagnant moisture around the roots. It is not difficult on well drained soil to have well ripened wood, to meet the approach of the winter king; but almost impossible on moist rich lands when the autumn proves rainy. One cannot resist the conclusion that even in reading Mr. Downing and other authorities on horticulture, that one has more to

apprehend in pear culture from the ravages of blight, through an excess of water in the soil, than an excessive frigid atmosphere. Hence, the great importance of drainage both of the surface and subsoil; particularly on lands with heavy clay, tenacious subsoils, those found best adapted to the growth and fruiting of most varieties of pears.

Ossification of arteries is not the only cause of old man gangrene, neither is stagnant or excessive moisture only, although *perhaps most the frequent* cause of blight. Enough for the present, the rain is over.

NANSEMOND.

[We have not been blessed with many rainy days the past season, and earnestly as we desire to see them in future, they will be more agreeable, if they insure us more communication, from our friend Nansemond.—ED]

Fruits in Tide-Water.

Mr. Editor—Observation has taught us that climate and soil, in a marked degree. influence the size, appearance, and market value of certain fruits, as well as the health and longevity of the trees; hence the common remark that certain kinds *do* or *do not* succeed in certain locations. Sometimes the trees grow well and bear fruit which is either knotty and imperfect, or the fruit itself becomes diseased and drops just before coming to maturity, as is the case with the Albemarle pipin in this section. There is often observed a marked difference in the same fruits on *different soils* in the same climate and neighborhood, even on trees of the same age. We know that what is termed *careful culture*, which embraces attention to the soil as to its tilth and enrichment, attention to the trees as to pruning, thinning the fruit, and protection from injury by animals and insects have their influences; but there is something yet *undiscovered* in the *nature* of the soil independent of climatic and water influences, or that of elevation in the mountains, of which we can give no rational explanation. One of our most valuable apples for winter use, in Tide-water, is the Mademoschite, which I believe originated in Hyde county, N. C., where the trees flourish and the fruit is almost always perfect, as large, and equally handsome as the Wine Sap, and keeps much better. In this section it is quite variable in regard to the appearance of the fruit; in favorable seasons smooth, handsome, in others, on some soils, so knotty as to be almost worthless. From some observation in our own orchard, where there are over one hundred bearing trees, we have reasons to believe that

growing crops, requiring heavy manuring, as sweet and Irish potatoes, has a great tendency to prevent this knotty appearance. The present season *only* those trees growing on *uncultivated* land and those where corn was grown presented knotty fruit. It is reasonable to suppose that where the tree is healthy, imperfection in fruit must be due to defective nutrition, or some climatic influence beyond our control. With these general considerations, I will proceed to the proper subject of this paper—

PEARS—*Mooré Pound*—This noble fruit is described in Downing as Horenschenck, with five or six synonyms, and is known in Tide-water as Mooré White Pound. Mr. D. says the tree is "vigorous, productive"—true, as we find it, but a very slow grower while young. "Fruit roundish, oblate, and of medium size; skin, light yellowish green, rarely with a blush;" we find it nearly white when ripe for shipping, and of large, *very large* size, exceeding the Bartlett and rivalling the Duchesse d' Angouleme. "Flesh rather coarse, tender, juicy, slightly vinous, melting with a pleasant flavor. Good to very good. Ripens last of August." It is the most profitable pear of Tide-water, and is shipped last week in July, two weeks before the Seckel or Bartlett, and from its size and handsome appearance always commands a good price, when the early small summer pears barely pay expenses of shipment. There is one tree of this variety within a few miles of where I write, which has paid from thirty-five to forty-five dollars per annum since the war. While it appears to flourish best in the immediate vicinity of the water; we find a number of the trees scattered through the country, doing well many miles distant from the coast, and much less subject to blight than the Bartlett. It being a slow and not handsome grower in the nursery has caused its propagation to be almost entirely abandoned, so that it is impossible to obtain the trees in any quantity. By whip grafting on the ends of the limbs of any rapid growing variety (trees three or four years old), such as the Flemish Beauty, with grafts of this Mooré Pound, a valuable orchard might soon be obtained. The writer finds from a number of trials made during the past three years, that both buds and grafts take and grow very rapidly, and that it unites well with the Quince, and, as an experiment, has it growing on both the Angiers and Orange quince stocks, which are not yet of fruiting age.

Seckel—This is considered the most delicious of all pears, and notwithstanding its small size, generally sells well. We find it much *larger* in Tide-water Virginia than in the mountains of Virginia, or at the North, and in several instances have seen its size nearly

doubled, by manuring the trees, and thinning the fruit. Without pruning it forms a beautiful head, and, as it grows well in sod, is the best ornamental *shade* fruit tree we have, except, perhaps, some of the Bigarreau cherries. It is a tardy bearer, but may be made to fruit earlier by double working on the quince stock, or on the pear stock, and moderate root-pruning and manuring. The fruit is shipped about a week before the Bartlett, and we find much difficulty in keeping it more than a week after maturity, and while a fall fruit at the North, its season is strictly summer with us.

Howell—Immediately after, or even with the Seckel, the Howell comes in market, and succeeds so well in Tide-water—healthy, vigorous trees—on both pear and quince stocks, as Standards and Dwarfs, bearing very early, smooth, handsome fruit, neither very large nor very small, even and regularly distributed over the trees, that I am disposed to regard it as one of the best varieties for either family or market. It is an August pear with us, and keeps a month after picking, on shelves, in a dry, cool room.

NANSEMOND.

Exchange, November 22, 1870.

Miscellany.

RAISING PLUMS.—Hearing that Mr. Thomas Smith, a near neighbor of Mr. Williams, was very successful in raising plums, I went to find out how that object was accomplished. For several years his trees did nothing; they were growing in sod ground. Since this plum orchard has flourished, the sod has been totally destroyed; the ground under the trees is as bare as a well-traveled road, and nearly as hard. The hard clay seems to be well packed. There is a high fence all round it, and a large flock of fowls are confined there. The ground being so bare, the chickens have full power over the insects, but I do not believe this is all the benefit. These chickens are fed daily, and sumptuously at that, from an extensive boiling house. All the refuse of meat and small bones are assorted from the larger bones. The latter are sent to the Boston market (a better one than Detroit), to be manufactured into bone dust. In my opinion, there is no artificial manure equal to bone dust, for immediate use, and the coarser for future crops, and I believe that Michigan will find out ere long the benefit of keeping such material at home. These small bones, distributed all over this small plum orchard, add much to the growth of the trees and their fruitfulness.

The early plums were all gone. Mr. Smith had taken them all to market, and sold them for four dollars per bushel: while the later trees were loaded to excess, not a mark from a curculio could be seen; every plum was perfect.—*West. Rural (extract).*

Toads vs. Insects.—The question of Toads vs. Insects is sure to come up, and perhaps an experiment of mine on the capacity of a toad may be of interest. Dr. T. W. Harris remarked to me some twenty years ago, that he supposed the odor of the Squash bug (*Coreus tristis*) would protect it from the toad; and to test the matter I offered one to a grave-looking Bufo under a cabbage. He seized it eagerly, but spit it out instantly, reared up on his hind legs and put his front feet on top of his head for an instant, as if in pain, and then disappeared across the garden in a series of the greatest leaps I ever saw a toad make. Perhaps the bug bit the biter. Not satisfied with this, I hunted up another old toad, who lived under the piazza, and always sunned himself in one place in the grass, and offered him a fine Squash bug, which he took and swallowed, winking in a very satisfied manner. Twenty other fine bugs followed the first, in a few moments, with no difficulty nor hesitation in the taking or swallowing, though, from his wriggling and contortions afterward, it seemed as if their corners did not set well within. The stock of bugs being then exhausted, I found a colony of smooth black larvæ on a white birch, each about three-quarters of an inch long, and fed him over a hundred of them. Touching one of them with the end of a straw, it would coil around it, and then, when shaken before him, he would seize and swallow it, at first eagerly, but with diminished zest as the number increased, until it became necessary to rub the worm against his lips for some time before he could decide about it. He would then take it and sit with his lips ajar for a short time, gathering strength and resolution, and then swallow by a desperate effort.

There is no telling what the number or result would have been, but the dinner bell rang as the 101st worm disappeared, and by the close of the meal he had retired to his den; nor did he appear for four days in his sunning place. It is to be hoped he slept well, but there might have been nightmares.—*Entomologist and Botanist.*

Transplanting Rhubarb.—Rhubarb roots require replanting occasionally. If the stools remain undisturbed for several years, they often commence to decay in the centre, and after awhile the whole plant becomes diseased. Every four or five years the stalks should be lifted and divided, leaving but one large crown, with its

accompanying roots attached. These may again be planted in the same soil, or upon some fresh plat, the latter method being preferable, although we are not a very strong disciple of the theory that plants run out if grown for many years in the same soil.

Rhubarb is very much like asparagus as regards fertilizing materials; the more the better, and an extra application afterwards will always be beneficial. A very deep and rich soil are among the indispensable adjuncts of successful rhubarb culture. Transplant in fall, if possible, and plant in rows or hills, allowing plenty of room; no crowding will answer if large and thrifty stalks are desired. The crowns of the plants should be two to four inches under the surface, and a coat of mulch to new plantations will prevent injury from cold, and assist growth very materially the following spring.—*Rural New Yorker.*

The Violet—Napoleon's Flower.—The violet is the emblematic flower of the Bonapartes, as the lily is of the Bourbons. When Eugenie agreed to accept Napoleon's offer of marriage, she expressed it only by appearing one evening dressed in an exquisite violet toilet—violets in her hair, in her dress, even to a branch in her hand. Louis Napoleon understood, and it was his only answer. Napoleon, while consul, selected this as his flower. It was through Josephine asking him to bring her a boquet of them on her birthday—a desire he was only able to serve after very great difficulty. He cultivated them assiduously while a prisoner at St. Helena; and they were profusely planted over the grave of Josephine. After his death, his coffin was covered with the humble flowers he loved. It is even said that in the earlier days of Louis Napoleon, he was silently made acquainted with who his secret friends were by a cautious display of violets.—*Gard. Monthly.*

Double Flower Pots.—Plants thrive better in double flower pots than in single ones; that is, if the pot containing the plant is placed inside a larger one with earth between the two. The outer pot prevents the sun from striking with too great force on the inner one, and thus keeps the plant moist, and secures for its roots a more even temperature. Flower pots containing plants may be kept in boxes, the interstices between the pots being filled with saw-dust. This arrangement is valuable in the heat of summer, for the box shades the pots from the rays of the sun, and the saw dust retains moisture around the plants.—*Exchange.*

Lily of the Valley in Winter.—The Lily of the Valley may be forced into bloom in winter as readily as the Hyacinth. Select

large, healthy clumps, and put them in good rich soil, and then place in a warm room, giving sufficient water to prevent drying, but not enough to cause a decay of roots. A box will answer, if pots cannot be obtained, and we are sure that those who are fond of house plants in winter, will be pleased with this little gem when in bloom; for its fragrance is not so powerful as to be offensive in a close room.—*Rural New Yorker.*

Tomatoes from Cuttings.—George Henning, Saratoga, N. Y., plants his tomato-seeds in January and February, and when the plants are five or six inches high, cuts off the tops just above the seed-leaves, and sets them out as cuttings in a properly prepared hot-bed, where they take root and grow. In April they are transplanted to cold frames, and finally set out in the open ground. Mr. Henning claims that by this treatment the plants have better roots than when allowed to retain their original ones, and that they bear earlier and are more productive.—*Am. Inst. Farmers' Club.*

Delaware Grapes.—The Delawares have been a great success this year. The crops have been fine, and the fruit of excellent quality. On September 15, they were selling in the New York market for eight cents per pound, at retail. So abuudant and cheap were they that wine-makers have bought them for pressing. The finest specimens we have seen were from Mr. Capron, Walden, Orange county, N. Y., and were not open to the fault usually found with the Delaware—that of being too small.—*Agriculturist.*

To Revive Old Trees.—Dr. George B. Wood, at a meeting of the Philosophical Society at Philadelphia, stated that some experiments made by him tend to show that non-bearing peach and other fruit trees may be revived by the application of ashes to the roots. He thinks that potash is the wanting ingredient, and is thus supplied.

To Keep Cider.—A correspondent of the *Country Gentleman* gives the following method of keeping cider: Take the cider when it is a week or ten days old, fill bottles *nearly full*, cork tightly and seal over; then bury them, with corks *downward*, in the cellar.

If you want to have good gardens in the spring manure *heavily* now—four or five inches thick with well-rotted manure. Spade up deeply, and loosen the ground still deeper with a pick. Leave the surface rough until next spring.

THE SOUTHERN PLANTER AND FARMER.

RICHMOND, VIRGINIA, ... JANUARY, 1871.

Editorial Department.

Winter Work.

There is no scarcity of work during the winter months—work that is necessary and that tells—although we may not sow or plant, as every farmer knows. But all do not know equally well, or there would be less of this valuable time wasted. All repairs to house, barn, fences, or gates not only ought to but must be done now, for there will be no other opportunity during the year. Tools must be mended and put in proper condition for spring and summer work. Manure is to be hauled out, and very often a great deal of ploughing can be done. If any man has determined to give more care to his manure heap than has been his custom, now is the time to carry out his intentions. Of course, the care of his stock will occupy a most important share of every farmer's attention. Experience has taught him that it will not do to leave the feeding and housing to be done without his constant supervision. A hearty co-operation in road making and mending in this comparatively leisure season will add much to the convenience and prosperity of a community. A recent act of the Legislature re-establishes the old road laws, and those who were unwilling may now be compelled to help. But the days are short, and the evenings long, and there is much time for reading and thinking. The results of the past year's operations may be carefully weighed and experiences noted. Thus, the recurrence of errors may be guarded against and success insured. In this connection we beg that the *Southern Planter and Farmer* may not be forgotten, but that we may have the benefit of all the practice that is deemed worthy of record or remembrance. It is often said that a great deal of the farming in the State is not remunerative, and the experiences of both those who have not and those who have succeeded cannot fail to teach useful lessons. We have, however, a favorite idea about the profits of farming, which we would like to eliminate and develop through the experience of others. It is that farming is not much less profitable now than formerly. The main difference being that we expect greater results than we have a right to look for. It never was claimed that farming would pay a heavy percentage upon the investment; and now, when money is at so high a premium, farmers are discouraged by their small profits, knowing,

in many instances, that if the farm and stock were sold and the money loaned, the income would be larger than that received from farming operations. We hope to have the opinions of many practical men upon this subject, and firmly believe that much encouragement would be received from a proper understanding of the matter. We may say here that we *know* there are no lack of men in Virginia who are capable of writing for farm journals in an interesting and instructive manner, because we constantly see their letters in our exchanges published out of the State.

1871.

It was intended to suggest a host of things which ought to be done during this year, but time and space prohibit, and there is only opportunity to mention one matter which appears to be of overwhelming magnitude, for which the people of the State are now ready, and for the accomplishment of which circumstances and surroundings are all favorable. We refer to State action in the general interests of agriculture. Before this is read, some disposition will probably have been made of the subsidy from the Government for agricultural education. Of course there will be, in connection with this matter, a Board of Agriculture appointed, and it is from and through this board that we must expect the greatest results to the agriculture of the State. This is assuming that their duties shall not be confined to a superintendence of the agricultural school, but that there shall be inaugurated under their care an agricultural *centre* to which all may turn with certainty of obtaining both scientific and practical information. They must be vested with authority, and provided with means to give encouragement to every branch of agricultural industry. The Legislature of Virginia cannot help knowing that all other interests in the State are subordinate to and directly dependent upon the prosperity of its agriculture, and we do not hesitate to say that the people will heartily endorse any action that looks to its elevation and improvement.

The following report of the committee appointed by the State Agricultural Society to confer with Gov. Walker concerning the "fence law," as amended and passed by the Legislature at its session in October, 1870, speaks for itself. It puts the whole matter in a clear and comprehensive manner, and we hope our legislators will see the propriety of accepting the views of our landholders thus authoritatively set forth:

To the Hon. Gilbert C. Walker, Governor of Virginia:

Sir—On the 26th of January, 1866, the Legislature passed an act in regard to enclosures. Its purpose was to relieve the farmers of the State from the heavy tax incurred in fencing their lands unnecessarily, especially in districts which had been overrun by both of the contending armies of the late war. This end was proposed to be reached by giving to the county courts of each county the right to apply the provisions of the law to the area within its jurisdiction, and to apply them to the whole or a part. These provisions have been thus applied in many instances; the farmers have got to work under them, and feeling that they would not be burdened in the future as they were in the past, under the old law of enclosures, they have not only foreborne to put up new fences, but allowed the old ones to rot down.

But within the past few days an act—enrolled bill 303—has been passed by the Legislature, giving to the supervisors of each county the powers that the act of 1866 vested in the county courts, and (in section 5) an additional power, viz: the power of repealing what has been done in this regard in time past, and what may be done in the future by their own body.

Against the passage of a law containing these features or any like them, the Executive Committee of the Virginia State Agricultural Society after consultation among themselves, and with such of their constituents as they have been able to see at the Fair, most respectfully urge the interposition of the executive veto. They do this for the following reasons:

FIRST—THE BURDEN THAT MAY BE IMPOSED BY SUCH A LAW.

This may be illustrated, *pro forma*, by the case of one part of one county—Chesterfield—which part now enjoys the benefit of the act of 1866. Its area comprises 38,000 acres. Its land tax in 1861.(which afforded the only existing data when the calculations were made) was $2.862, or 7½ cents per acre upon a total assessment of $715,657, or an average of $18 75 per acre. Its live stock, of every sort, at the same time, numbered 3,273, worth, excluding horses and mules, $13,963, or about $5 per head. It contained 81 farms of an average size of 471 acres; an aggregate arable area of about 2,800 acres; and an aggregate annual production in corn, wheat and oats, at six bushels per acre, of 170,000 bushels, worth all round certainly not more than $1 per bushel. or $170,000. and yielding to the farmer a net profit of assuredly not more than 10 per cent., or $17,000. These facts were all obtained from the commissioner's books and from the census returns of the United States.

To show the burden of the law in the light of these facts, the following calculation, carefully prepared on the basis of a written statement from a man who had just then erected a legal plank fence on a part of his land, is submitted here:

Cost of outside fence for farms of 50, 125, 250, and 500 acres respectively, supposing them to be square or nearly so.

Fifty acres, 1,968 running yards, requiring 738 posts and 14,760 feet of lumber for 737 pannels of 8 feet each.

COST OF MATERIAL AND BUILDING.

14,760 feet of lumber at $25 per M	$369 00
738 posts at 20 cents, $147 60; building 737 pannels at 20 cents. $147 40	295 00
3 kegs nails at $8	24 00
Total cost $13 76 per acre; 66 per cent. of value of land	$688 00

125 ACRES—COST OF MATERIAL, &c.

23,437 feet of lumber at $25 per M	$585 92
1,182 posts at 20 cents, 236 40; building 1,181 pannels at 20 cents, $236 20	472 60
4 kegs nails at $8	32 00
Total cost, $8 72 per acre; half the value of the land	$1,090 52

250 ACRES—COST OF MATERIAL, &C.

32,498 feet of lumber at $25 per M	$812 45
1,625 posts at 20 cents; building 1,621 pannels at 20 cents	649 80
6 kegs nails at $8	48 00
Total cost, $6 04 per acre; one-third value of land	$1,510 25

500 ACRES—COST OF MATERIAL, &C.

46,725 feet of lumber at $25 per M	$1,108 12
2,337 posts at 20 cts., $467 40; building 2336 pannels at 20 cts.	934 60
8 kegs nails at $8	64 00
Total cost, $4 per acre; one-fourth value of the land	$2,168 72

It will be observed that the cost of the fence increases as the area is reduced, falling most heavily on the smallest landholders—costing, in his case, two-thirds, in the next one-half, in the next one-third, and in the last one-fourth the value of the land; ranging from 209 times to 57 times the amount of the State land-tax of 1861; and aggregating $168,730.

But this sum amounts to a tax of nearly ten times the assumed annual profits of the farmer, or one-third the value of the land; or twelve times the value of the stock to be fenced out.

Assuming as the most favorable, but really impossible, conditions that all farms are of equal size, and that all join, so as to give each only half the fencing, there would still be, by this *pro forma*, a tax of one half the above sums, viz: five times the annual profits; one-sixth the value of the lands, or six times the value of the stock. The fact is, however, that the sinuosities of dividing lines and the existence of public roads makes the tax approximate more nearly to the first statement.

But really that statement falls below the mark. The late reassessment of these lands show that they have fallen in value. There is hardly a case in that district, or, indeed, anywhere in Eastern Virginia, where the farmer has made one per cent. net profit, much less ten; and the live stock do not now number one-half as many as they did in 1861. No wonder that there is at this moment hardly a lawful fence in Eastern Virginia, even in counties which have not had applied to them the provision of the new law. This argument leaves out of view the additional perpetual tax of annual repairs.

SECOND—THE POLICY OF SUCH A LAW.

The supervisors are, in many counties of the State, either colored men or men of none or so little property and intelligence that they will disregard, because they do not comprehend, or think they will not feel, the infliction of the injury they may do. They are, therefore, unfit depositories of such a power, especially so, if they are to be invested (as section 5 of the bill proposes) with the power of enacting, repealing, and re-enacting the law at pleasure, thereby having legislative combined with their administrative powers.

The law may be made to operate as a virtual and heavy tax on conveyances, a tax without the least corresponding benefits, for who will buy land so heavily burdened? In the same way it discourages leases, for who will rent land if they are compelled to fence out strangers' stock? And still, in the same way, it tends to keep out immigration. It is hard now to get northern men or for-

eigners to believe, what is really the fact, that the lands in Virginia are more profitable than those of the West. But who will prefer Virginia to the prairies if they are exposed to the risk of such a tax as ignorant or reckless supervisors may impose at pleasure upper this law?

The effect of such a tax will be disastrous to labor, for who can pay his laborers as much, or employ as many of them, if he has to divert their exertions from production of crops to protection of crops?

It will also lead to frequent hostile collisions and violent breaches of the peace; for, as the farmer cannot sell his land, and cannot afford to fence it, he must cultivate it, and protect his crops by the strong arm.

Such a tax will inflict a most serious blow on public credit, that now staggers under its load, and threatens daily to fall. The farmers of Virginia pay their full share; they are straining every nerve and muscle to do it. But thousands of them will be overwhelmed if the scanty fund that yields their hard-earned tribute is shut up from use by an impossible condition of culture.

It is no answer to say, as this bill does, that a repeal of the provisions of the law of 1866 cannot take place until a year's notice has been given. For what is that but a notice to the farmer that at the end of that time he will be a ruined man?

Neither is it an answer to say that in many places fences are necessary; for every farmer who thinks so can appropriate the benefit to himself by building as many fences as he pleases upon his own land. We do not propose to prevent him. For these reasons, sir, presented at too much length, perhaps, because you are not supposed to be as familiar with the rural polity of Virginia as you are with her public and private financial trials, we most respectfully invoke your veto in behalf of the most important interest of the State, this moment threatened with vital injury.

We mean no disrespect whatever to the Legislature. Composed as that body is of heterogeneous materials, strangers to each other, new to legislation, environed with embarrassments that might well appall experienced statesmen, we have no word of censure for them in this matter. We only think their action in the premises presents just such a case of hasty legislation as our constitution, like the Federal constitution, contemplates as likely to occur, and when occurring as proper to be controlled by the executive representative of every interest and all the people in the Commonwealth.

FRANK G. RUFEIN,
WM. T. WALKER,
E. RUFFIN, JR.,
Sub-Committee.

November 3, 1870.

THE COST OF DIFFERENT CROPS.—A gentleman asks us to give him an estimate of the cost of planting, cultivating, harvesting and marketing an acre of corn with and without fertilizers. Of course we could make an estimate on paper, but would prefer to have it from several farmers who have kept accounts, and we invite any who have sufficient data to communicate with us.

We also commend this subject to the attention of the Farmer's Clubs, and suggest that they extend their discussions to other crops.

GIVE CREDIT.—We are not very punctilious, but, as all other publications do, we like to have credit for such of our articles as our exchanges find it desirable to republish. The *Carolina Farmer* of November 18th has our correspondent's harness article credited to "Ex."

Correspondence of the Southern Planter and Farmer.

THE MOON AGAIN.

Mr. Editor,—The idea of referring to the moon and "the man in the moon" everything which we cannot understand or explain, is as unjust as unreasonable. Why not divide with her some of the faults and short comings in nature, and attribute some of them to the planets? Is she the source of *all* our follies? Who said she was the Eve of the universe, whose gentle rays bring "death into the world and all our woes?"

It is very strange that the most minute physical research for ages has failed to observe—much less demonstrate—the wonderful phenomena which ignorance and superstition attribute to the moon and call *facts*.

It is true that there are certain periodical phenomena in the history of the life of man, and other living beings, the attempt to explain which has given rise to various speculations; for example, the regular periodic recurrence of the paroxysms of intermittent fever, which some attribute to force of habit, others to diurnal revolution, and others again to some *general law of the universe;* by which latter is meant *nothing*, except that it is supposed to be connected in some way with the periodic recurrence of the seasons, the ebbing and flowing of the tides, &c., which are said to occur as well in the circumambient *atmosphere* as in the ocean. See how prone we are to shove out into *the universe* every difficulty which we cannot handle! Now let us "fight in the Union," and if we should get baffled, we will not be so far from home.

As to the lunar tide, it is very reasonably said to be due to the moon's attraction on the circumambient ocean, and there is also observable a solar tide produced by the greater attraction of the sun, but which is less marked at any one place on account of the much greater size and distance of the disturbing body.

We have heard a great deal about the moon's influence upon meat—about its shrinking up in the pot, because it was killed on the wane of the moon (most likely due to the kleptomania of the cook,) but that a few hours' exposure in moonshine will cause it to taint, is demonstrably not true; for in this portion of the State we often kill our meat long before day, and it is thereby exposed to the moonlight for several hours, and it not unfrequently hangs out all night, that it may get thoroughly cold, and yet I have never experienced any of the evil effects spoken of by your correspondent.

If your correspondent will *demonstrate* any one of the widely different effects which people attribute to the moon as a cause, we are ready to knock under, and to award him that honor which shall place him along side of Newton, Franklin and Dr. Turner; but we think that it will take a more penetrating mind than that of Newton, who detected a common causation between the fall of a stone to the earth and to the motion of the moon in an elliptical orbit around it, or that of Franklin, who determined the identity of lightning with the spark from an electrical machine, to detect any relation of common causation between the wonderfully different phenomena which people attribute to the effects of the moon.

Quackery bears upon its face its absurdity in the multitudinous diseases, different in their nature, which the same remedy is reputed to cure; and we think there is about as much probability of it making this earth a blissful paradise, as there is in demonstrating that the moon is the only bar to that happy consummation.

Now as to the *zodiacal sign*, I must confess that I know nothing about its wanderings. When does it get into a fellow's head? But I must close, as I have strenuously endeavored to avoid all ridicule in this letter, and in conclusion I desire to say that I am truly sorry to have offended the lunary equilibrium of our "otherwise truthful" "*plowman;*" and while I have no doubt but he is perfectly *honest* and *sincere* in his convictions, yet I think they need to be corrected, as they imply a palpable reflection on the great economy of nature.

J. V. B.

SCIENTIFIC AGRICULTURAL EDUCATION.

Mr. Editor,—Your correspondent, "Festina lente," evidently a gentleman of education, attempts to ridicule scientific agricultural education by citing several examples of men, who have improved their lands and increased the average yield of their crops, either by introducing new forms of culture or by applying such mineral manures as were calculated to render their lands more productive.

It is undoubtedly true that men of superior talents and cultivated intellects, such as John Tyler and Edmund Ruffin, or men even of strong minds and good common sense, are capable of originating means and trying experiments, which are of scientific import, though they may never have studied the branch of science peculiar to their vocation. When your correspondent tells us that Fielding Lewis was the pioneer of liming in the tide-water regions, and that Edmund Ruffin had increased the yield of Marlbourne about 1200 per cent. by the application of green sand, he makes the best argument in favor of scientific agricultural education that can be made. But these gentlemen did certainly not apply the mineral manures referred to at a mere venture, because without some knowledge of the advantages that might be derived from their application, it might have ruined instead of improving their crops. Now they must have reasoned on the subject, and the one probably came to the conclusion that as lime manure improved a clover crop—a fact long and universally known—it was a proper ingredient which all crops need for their growth; and the other must have been acquainted with the fact that green sand has been used in New Jersey as a fertilizer of certain soils, and he probably tried the experiment of improving by this means the Marlbourne soil. Or these gentlemen reached the same conclusion in some other way, and their powers of observation and practical experience enabled them to discover facts which other less gifted men could have never discovered without a scientific education.

That a man like Mr. Ruffin, who probably read all the scientific periodicals on agriculture published in this country and in England, is stated by your correspondent not to have possessed "a complete agricultural education," is merely begging the question. Mr. Ruffin may not have been as expert an analytical chemist as some professors of agricultural colleges, but no one who has ever read his writings can doubt that he was a scientific agriculturist, and what may have been wanting in him in theoretical knowledge was more than compensated by his eminent talents and his great powers of observation.

Even if it were admitted that the examples cited supported the proposition that the profession of agriculture may be successfully prosecuted without a scientific education—a fact which cannot be denied—yet it must be equally admitted, that these examples, in the light in which your correspondent refers to them, are exceptions to the rule, and they prove only that great minds may

excel in any branch of human knowledge by the mere force of intellect, without any guidance from books or theoretical principles. If such were not the case, none of the sciences would really have an existence; there must always be some superior mind who lays the foundation and who makes the first discovery.

These examples, then, do not in the least militate against the practical utility and the advantages of scientific agricultural schools, where principles and theories are harmonized with practical experiments. On the contrary, they furnish evident proof that men who have their minds disciplined by education, (not necessarily book education,) are capable of educating themselves as scientific farmers as many an eminent lawyer has educated himself without attending a regular law course in a law school.

Nor does the gentleman make a conclusive statement with regard to agricultural education in England. If it is really true that England stands at the head of European agriculture, it is principally due to the scientific as well as practical agricultural education of those who conduct the agricultural operations of the large estates owned by wealthy landholders; and even those who have leaseholds are required by the terms of their lease to cultivate the land upon a scientific system, so as not to deteriorate but rather improve its quality.

Your correspondent refers to the comparatively few students of the Royal Agricultural College of Cirencester and the Agricultural Department of the Edinburgh University, as a proof that agricultural education is far from being general in England. But he neglects to state that in addition to these schools, there are in England and Scotland numerous Agricultural Societies, who appoint committees on agricultural education, and are authorized by their charter to grant diplomas to those who have a thorough acquaintance with the details of practical farming, and are in addition conversant with botany, scientific and applied chemistry, natural history, including geology, veterinary medicine and surgery, field engineering and surveying, the principles of mechanics and construction, and book-keeping.

Besides, a thousand scientific farmers scattered over a small country like England are able, by their example and neighborly offices, to change the agricultural system of nearly all the farming communities of the kingdom, by imparting their knowledge to their less informed neighbors.

Nor has scientific agriculture anything to do with Pliny or Cato, although a practical agriculturist, with a classical and scientific education, might probably draw some useful hints even from Virgil's Georgics and other works of the ancients. While a farmer may succeed in producing a good crop of corn without knowing its botanical name, or a market gardener may send the finest specimens of tomatoes to the market without having ever heard that they are botanically known by the name of Lycopersicum esculentum; yet it would certainly not injure the farmer's corn crop, nor would the gardener's tomatoes grow less vigorously, if either of them actually possessed that modicum of technical science.

Whether scientific agriculture is generally of much advantage in this country, except as an educational discipline, is quite another question. It would undoubtedly be of great service in Virginia and Maryland, where lands are old and much worn, and the population is, comparatively speaking, permanent.

In States where a man squats down on a tract of land to improve it just enough to make it more saleable, or where land can be bought at government

price and the soil is still new and requires no fertilizers, an agricultural education would not be of much advantage, for scientific farming would bring no equivalent compensation.

But where a man looks upon his farm as his permanent home and the home of his children, he ought to be possessed of all the knowledge, practical and scientific, to make that home a place to which he becomes attached, not merely by pleasing associations, but by improving its lands by embellishing it with all that modern science, as well as modern practice, has devised or may suggest. F.

Messrs. Editors—Some editorial comments on the Fair, in the December number of the *Planter*, require notice—particularly on the appointment and performance of the duty of judges of awards. It is a subject of importance to the success of the annual exhibitions of the State Agricultural Society, and has commanded much of the attention, time, and labor of the Executive Committee. Every effort has been made to secure the best appointment of judges, and to insure the attendance of those selected. The Legislature of the State happened to be in session at the time of the preparation of the last annual list, and the aid of the members was invoked in order to secure, as far as practicable, the best and most suitable men, and, at the same time, a representation from every part of the State. Many of the names thus obtained were known to one or more of the committee and approved. But the practical difficulty has been to get these judges to come up to their work and do it. Every one of them was, through the mail, notified of his appointment, a copy of the Premium List, Rules and Regulations of the Society sent him, and a communication addressed to *each one*, by the Secretary, requesting his acceptance, and in the event that he could not attend and discharge the duties, that information be given of his inability, that the vacancy might be filled. This was no inconsiderable labor, requiring day after day of session, and, as readily may be inferred, a vast amount of clerical work. Out of the 470 judges thus appointed *and communicated with*, not more than six or eight declined, or gave notice to that effect, and the officers of the Society felicitated themselves on the prospect of a prompt and full attendance and discharge of the duties assumed. Not content, however, with this, the committee appointed three of its own members in each of the six departments of the Fair, an advisory board, promptly to act, and fill vacancies that might by possibility occur and be reported. But, with all this preparation, foresight, and anticipatory action, much confusion ensued and embarrassment resulted from the want of punctuality on the part of the judges in meeting and organizing for their work.

That portion of your article interrogatively put is reproduced, that the reader may understand without again refering to it. It is in these words: "if the Executive Committe have selected proper persons, have notified them of their appointment, and obtained their consent to serve in this capacity, they have certainly done their part."

The committee will doubtless be pleased to have any suggestions calculated to remove the practical difficulties encountered on this subject.

Very respectfully, E. G. Leigh, Sec'y.

Official Report of the Transactions of the Va. State Ag. Society.

At a general meeting of the members of the Virginia State Agricultural Society held at the First Baptist Church, Wednesday evening, Nov. 2, 1870—

Mr. President Sutherlin called the meeting to order; and, upon taking the chair, announced that it did not accord with the convenience of Commodore Maury, the selected orator for the occasion, to deliver the annual address before the Society this evening as appointed; whereupon Mr. James Lyons moved that a committee be appointed to wait upon the orator and request that the address be delivered this evening.

The President appointed Governor Smith, W. H. McFarland, Esq., and Gen. Richardson a committee, who reported that Commodore Maury, for reasons satisfactory, could not address the Society to-night; whereupon it was resolved, that the address be delivered in this room to-morrow evening immediately after the adjournment of the meeting of the Soldiers Society, and that the committee give information accordingly.

The meeting then proceeded to the election of officers for the ensuing year—Mr. Lyons, being invited by the President, taking the chair.

Major W. T. Sutherlin addressed the meeting, declining a re-election to the office of President.

Mr. Thomas Branch nominated Lewis E. Harvie, of Amelia, which was seconded by Mr. Anderson, and sustained by Mr. Lyons.

Col. Nelson, of Hanover, nominated Major Sutherlin for re-election, who again declined.

Mr. Nelson then put in nomination, General Wm. H. F. Lee, of New Kent, which was seconded and supported.

Before proceeding to the vote, the question arose as to the presence of a quorum, and, tellers being appointed, it was ascertained that a constitutional quorum was not preseut.

On motion the meeting adjourned till to morrow evening 7 o'clock.

Thursday Evening.—The Society met according to adjournment, Major Sutherlin, President, in the chair.

The subject of the election of officers being called up, the Secretary was directed to call the roll to ascertain whether a quorum was present, and, tellers being appointed, reported that there were 106 life-members present, in person, and 154 by proxy. The constitution requiring 200, it was declared that the requisite number was in attendance. It was then moved and carried that parents present should sign the names of their minor children, life members of the Society, in order that they might be represented by proxy.

The meeting then proceeded to the election of officers. Mr. Edmund Ruffin was put in nomination for President, but, upon decidedly declining, his name was withdrawn.

Mr. Lewis E. Harvie was nominated and seconded.

General W. H. F. Lee put in nomination and seconded.

The President then announced that there were but two names before the meeting—General Wm. H. F. Lee, of New Kent, and Mr. Lewis E. Harvie, of Amelia; and, upon the roll being called, the vote stood as follows:

	For Lee.	For Harvie.
By proxy,	73	107
Individual,	58	61
Total vote,	131	168

Majority for Harvie, 37.

Whereupon Lewis E. Harvie was declared duly elected President of the Society, commencing with the calendar year the 1st January, 1871.

General Wickham moved an amendment to the constitution as to admitting the votes of annual members, which, on motion, was indefinitely postponed.

A committee, consisting of Colonel Hobson and W. Roane Ruffin, Esq., was appointed to wait on Mr. Harvie and inform him of his election. Mr. Harvie thereupon appeared and accepted the office.

The following Vice Presidents were then elected: 1st, Gen. Wm. H. F. Lee; 2d, Major W. T. Sutherlin; 3d, Frank G. Ruffin; 4th, R. Barton Haxall; 5th, S. W. Ficklin; 6th, Edmund Ruffin; 7th, John T. Cowan; 8th, J. Marshall McCue.

Executive Committee.—Wm. C. Knight, R. H. Dulaney, R. W. N. Noland, F. N. Watkins, A. H. Drewry, Dr. W. C. Staples, Dr. R. E. Haskins, Franklin Stearns, Dr. W. T. Walker, and Richard Irby.

Secretary and Treasurer.—E. G. Leigh.

Mr. Harvie then moved to amend the constitution so as to provide for the election of a Ninth Vice President, which resulted:

	For the Amendment.	Against the Amenment.
Individual,	49	15
Proxy,	121	89
Total,	170	104

Two-thirds of those present not voting for the amendment, it is, by constitutional provision, lost.

On motion resolved, that this Society, in general meeting assembled, hereby tender to Colonel C. Q. Tompkins, Chief Marshal of the Fair, thanks for the earnest and efficient services rendered by him, and, as a token of appreciation, he is elected an honorary member of the Society, which was *unanimously* adopted.

The meeting then adjourned *sine die*.

E. G. Leigh, Secretary.

Messrs. Editors—Please ask your able correspondents to give us their several experiences with commercial fertilizers on corn. If the corn will pay back in increased yield the cost, or nearly so, of the fertilizers we can afford, I think, to use them. S. R.

A lady correspondent asks: "Will you please inform me through your medium how to make good cheese candy, strawberry wine, and vinegar; and also, where I can procure the pure Brahma chickens, and the cost per pair."

Another lady asks us how to make good light bread without lard. If it is a possibility, will some one please send the receipt?

Book Notices, &c.

The Practical Planter, Memphis, Tenn.; Thos. Darden & Co., Publishers—George W. Gift, Editor; $1 50 per annum. This spirited journal is a valuable acquisition to the list of agricultural magazines.

Transactions of the Wisconsin State Agricultural Society, with the report of the State Horticultural Society, 1869—vol. viii. This book is of great value in indicating the interests and resources of the State.

Report of the Commissioner of Agriculture for 1869. These valuable collections of national agricultural and industrial papers are highly appreciated.

American Sunday School Worker.—The November number of this journal, published by J. W. McIntyre, St. Louis, beside its usual valuable contents, has very full announcements of its plans and reduced terms, with list of lessons for 1871. As the publisher offers to send this number free of charge, we advise Sunday Schools adopting a series of lessons for next year to send for a specimen copy.

Messrs. Sitwell, Harris & Co., Louisville, Ky., advertising agents, are enterprising and reliable men. We receive through them the advertisement of "Moore's Rural New Yorker," which has become a vigorous claimant for public favor.

The Scientific American, Munn & Co., 37 Park Row, New York. Has been before the people for 26 years. This of itself is a sufficient guarantee of its high character and usefulness.

Our valued friends of the "New Eclectic Magazine" will have effected some important changes for this month. Mr. Lawrence Turnbull retires, much regretted, from his connection with it, and for the future it will be conducted by Messrs. Fridge Murdock, Wm. Hand Browne, and Wm. L. Hill. The name, also, will be changed to the "Southern Magazine," which is more appropriate since it has lost its eclectic character and has become an original magazine of high merit. It deserves the universal patronage of our people.

The Educational Journal of Virginia, M. W. Hazlewood, business agent, $1 per annum. The December number sustains the promise of this journal to become a necessity to all interested in the great subject of education.

The Young Folks' Rural, Chicago, H. N. F. Lewis; $1 a year. Mr. Lewis is also the editor of the "Western Rural," so ably conducted; and we wish him every success in this new enterprise. It was full time that country boys had a better paper than are most that are published for them.

Galaxy—Sheldon & Co., 498 and 500 Broadway, N. Y.; $4 a year.

Appleton's Journal Weekly—D. Appleton & Co., 90, 92, and 94 Grand street, N. Y.; $4 a year.

Vick's Floral Guide for 1871 contains 300 illustrations and two colored plates. Send ten cents for it to James Vick, Rochester, New York.

Briggs & Bro.'s Illustrated Catalogue of Flower and Vegetable Seeds, Rochester, N. Y. Handsomely embellished.

MISCELLANEOUS.

Hints to Young Sportsmen.

Before taking the field, look well to your shooting irons. Fowling-pieces are far more apt to Get Foul while they are lying away during the off season, than when they are taken out for a day's sport by the fowlers.

On releasing your gun from its summer prison, always examine it carefully,

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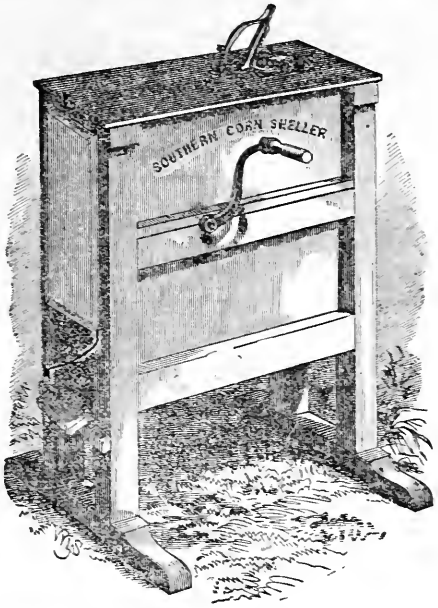

FIFTEEN DOLLARS.

Capacity from 150 to 175 Bushels per Day.

This Sheller is made from a new set of patterns recently improved by our senior partner, and possesses some important features not adopted by any other manufacturer, and we claim that we now have the best hand Sheller for Southern corn ever made. The recent improvements effectually guard against breakages, and not one of the thousands sold since the war but what is now as perfect as when sold, and will do good work for years to come.

The attention of the Agricultural Trade is especially invited to THE SOUTHERN SHELLER as one of the most desirable implements to keep in stock. A Sheller all farmers must have, and the price of this is so low that it is in the reach of all who raise corn, while its unerring certainty of action renders it as much a pleasure to sell them, as it is a satisfaction to the farmer to buy.

Shipping weight of this Sheller 145 pounds.

Southern Agricultural Machine Works,

1532 MAIN STREET,

H. M. SMITH & CO., Manufacturers.

dec–tf

POMEROY'S DEMOCRAT

For 1871.

Something for the Public to Know—Extraordinary Inducements for Subscribers to Pomeroy's Democrat, which Paper has the Largest Circulation of any Political Newspaper Ever Printed in this or any other Country.

So great has been the success of publishing this paper since it was begun in the City of New York, on the 1st day of January, 1869, that we are enabled to give the people of this country, a better paper for 1871, than was ever before printed in America.

The circulation of THE DEMOCRAT has more than doubled during the past year, and every Democratic victory, no matter in what part of the country occurring, brings THE DEMOCRAT more subscribers, more friends, defenders, readers, and circulators. We accept this rapid and constant increase of circulation as a proof that our good intentions, earnestness and determination to press forward the fight in behalf of Democracy everywhere are appreciated, and thus we are stimulated and encouraged to greater exertions.

To make THE DEMOCRAT readable and interesting the coming year, Mr. Pomeroy, the editor and proprietor, who is now relieved of the work of editing, managing and superintending his DAILY DEMOCRAT in the city of New York, will devote his entire time and attention to the WEEKLY. Possessed of abundant capital, unusual facilities for obtaining news, with a newspaper experience well known to the world, the public may rest assured that from this time henceforth THE DEMOCRAT will be more vigorous, pointed, determined and powerful, than ever before. Backed, as he is, by nearly a quarter of a million of subscribers, and more than a million of readers, supported by the Democrats and workingmen of every State and Territory, in communication with the people everywhere, and possessed of thousands upon thousands of letters giving him information and items of fact and incident occurring in different parts of the country—he enters anew upon the work in which he is engaged, and to which he has pledged his life, his fortune, his constant care and individual attention, from this time till we shall have in this country a Democratic President and administration, and a complete, effective, and thorough Democratic organization, pledged to the protection of labor and industry, to the encouragement of honesty, and to the defence and extension of Democratic principles.

The editorial articles for THE DEMOCRAT the coming year will be more than ever pointed, earnest, truthful, and convincing, as years of education and experience, governed by a knowledge of facts obtained from actual observation, enable a writer to give his thoughts with more clearness and power in each succeeding attempt.

In THE DEMOCRAT for 1871 will be found, in addition to the editorials no other Democrat dare write:

Pomeroy's Saturday Night chapters, which for the coming year will be better and more deeply interesting than ever before;

Editorial correspondence from various parts of the country, visited for the purpose of obtaining information and spreading it before the public;

Live editoral comments on men, measures, manners and customs;

Pomeroy's Social Chats with Friends and Correspondents, which has become such a feature, exclusive with THE DEMOCRAT; attempted by other papers only to be given up after a few weeks' work thereon, but continued from week to week in POMEROY'S DEMOCRAT, always with growing interest;

An unusually full and interesting Masonic Department, under the editorship of illustrious Brother F. G. Tisdall;

An Agricultural Department, much better than ever before;

A Mechanical Department, wherein will be found each week something of especial interest to all classes of mechanics;

Financial, Monetary and Market Report unusually full, complete and reliable;

Letters from our correspondents in this and other countries;

New York gossip concerning city manners, customs, and happenings in the musical, artistical, theatrical, and social world—a new feature in THE DEMOCRAT;

A carefully edited Fashion Department;

Happenings here and there in different parts of the country, or items caught on the fly, published under the head of Brick Dust;

Humorous, satirical, and burlesque sketches of Life, by "Brick" in the vein of his book of "Nonsense," of which over a hundred thousand copies have been sold by Carleton, the celebrated New York publisher;

Items of satire, news, sarcasm, burlesque, ugliness and impudence;

Pomeroy's Pictures of New York by Night, from actual observation;

Full columns every week of new, live and interesting reading matter, original and written expressly for THE DEMOCRAT;

Nothing will be left undone or unattempted, to make this paper the most readable ever published in the United States;

In politics, THE DEMOCRAT will be bold, earnest and—to use a word that has become national—Red Hot for the Right. It will make a continued and earnest war against the bond interests of this country, till taxation shall be made equal, or till the people shall rise in their might, and, through a revolution, escape from the bondage they are now in for the support of the thieves and robbers who control the Government, which was originally the best, but has become one of the worst the world ever saw. THE DEMOCRAT will labor for the restoration of the Government and the principles of Democracy, not for its reconstruction, for the benefit of an aristocracy; but in sympathy with honesty and labor.

Thankful to those who, in every State in the Union, and almost every county of the United States, have so generously sustained THE DEMOCRAT, before its removal to New York, and since, we offer the following premiums—as an evidence of gratitude to those who forward from time to time subscribers:

SINGLE COPIES, per year..... $3 50

THREE COPIES, one year, to one postoffice (we writing the names of subscribers on each paper), and a 19x24 steel engraved portrait of M. M. Pomeroy, which will be printed on the heaviest plate paper, for framing, and will rank with the choicest works of art in this country $7 00

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FIFTEEN COPIES, one year to one postoffice (we writing the names of subscribers on each paper), and a 24x30 inch proof print, steel engraving of Washington, on heavy plate paper, in India ink, published by Herring, from the original painting by Stuart. We have the only engravings of the kind in existence, as the plate is destroyed. The engraving sells at $5..... $30 00

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THIRTY COPIES, one year to one postoffice (we writing the names of subscribers on each paper), with two extra copies for the year, and a copy of each of POMEROY'S books, 'SENSE,' NONSENSE,' and 'SATURDAY NIGHT,' a new book just published, to the getter up of the club.. ..... $60 00

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For fifty-six subscribers, with $112, a $50 machine.
For sixty subscribers, with $120, a $60 machine.
For sixty-five subscribers, with $130, a $65 machine.
For one hundred subscribers, with $200, a $130 machine.

IMPORTANT NOTICE.

If you cannot conveniently raise subscribers enough to entitle you to a machine, as a premium, send what you can, with two dollars for each subscriber so sent, and the balance in cash for such priced machine as you may desire, when the paper and machine will be sent as directed.

For example, where thirty subscribers and sixty dollars are sent, it will require

twenty-six dollars in cash in addition to the subscription money to purchase a fifty-six dollar machine; or, forty subscribers and eighty dollars, sixteen dollars additional will be required to purchase the same priced machine, and so on in proportion.

We offer these unrivaled machines, believing them to be the simplest, most durable, useful and desirable sewing machines in the world, with a view to giving working men, or deserving women, a chance to obtain a machine for much less money than in any other possible way.

In many cases a few gentlemen might by sending their names to us as subscribers, receive for themselves THE DEMOCRAT, and a machine for some poor widow or other deserving woman, and thus giving her the power to care for herself and family, and live independent.

Each machine we send out will be *perfect*, and of the very best.

Address all letters on business connected with the office, to C. P. Sykes, Publisher, P. O. Box 5,217, New York City.

Letters on political matters should be addressed to M. M. Pomeroy, and if the writer wishes them to be seen only by the person to whom they are addressed, they should be marked private, when, if Mr. Pomeroy is not in the city, they will be forwarded to him immediately by mail, express or special messenger.

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In forwarding sums of money for clubs of subscribers, drafts or money-orders should always be used, as, if lost or stolen, they can be duplicated, and no financial loss will be sustained by the parties interested.

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THE

MARYLAND FARMER,

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A Periodical Published Monthly by

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BALTIMORE, MD.

It is a Reliable and practical Journal, devoted to the different departments of Field Culture, such as growing Field Crops; Orchard and Garden Fruits; Garden Vegetables and Flowers; Flowers for the Lawn and Yard; Trees and Plants; care of Domestic Animals, &c., together with all subjects of a kindred nature, interesting to the Farmer, Horticulturist, and Household.

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☞ Specimen copies sent free on application.

S. SANDS MILLS & CO., Publishers,
jan—4t 145 W. Pratt street, Baltimore, Md.

CHESAPEAKE AND OHIO RAILROAD.

On and after MONDAY, 5th December, 1870, the PASSENGER TRAINS will run as follows:

MAIL TRAIN will run DAILY between Richmond and Staunton (except Sunday, between Gordonsville and Staunton). Leave Richmond at 8 A. M.; arrive at Staunton at 4:28 P. M. Leave Staunton at 8:59 A. M. and arrive at Richmond at 4.50 P. M., making close connections at Gordonsville and Charlottesville with Orange, Alexandria and Manassas railroad trains for Alexandria, Washington, Baltimore, Philadelphia, New York, Boston, &c; also for Lynchburg, Knoxville, Chattanooga, Memphis, New Orleans, Montgomery, Mobile, &c. This train will run TRI-WEEKLY between Staunton and White Sulphur, on TUESDAY, THURSDAY, and SATURDAY, viz.: Leave White Sulphur at 3:30 A. M., and arrive at Staunton at 8:39 A. M; leave Staunton at 4:33 P. M., and arrive at White Sulphur at 10 P. M.

Going West, passengers dine at Gordonsville and sup at Covington. Going East, breakfast at Staunton and dine at Gordonsville

This train connects with stages as follows:

At Staunton for Lexington, Natural Bridge and Harrisonburg.

At Millboro' for Bath Alum Springs, 10 miles; and Warm Springs, 15 miles.

At White Sulphur Springs for Lewisburg, 9 miles; and Charleston, 109 miles.

THROUGH TICKETS issued to all points North, West and Southwest.

JAMES F. NETHERLAND,
jan—1t *General Ticket Agent.*

VICK'S FLORAL GUIDE FOR 1871.

The First Edition of One hundred and Fifty Thousand copies of *Vick's Illustrated Catalogue of Seeds and Floral Guide* is published and ready to send out—100 pages, and an Engraving of almost every desirable Flower and Vegetable. It is elegantly printed on fine tinted paper, illustrated with Three Hundred fine Wood Engravings and two beautiful COLORED PLATES. The most beautiful and the most instructive Floral Guide published. A German Edition published, in all other respects similar to the English.

Sent free to all my customers of 1870, as rapidly as possible, without application. Sent to all others who order them for 10 cents, which is not half the cost. Address,

JAMES VICK,
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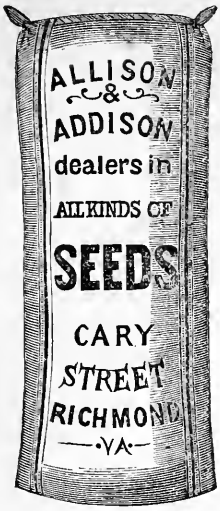

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OFFER A LARGE STOCK OF

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LUCERNE, MILLET,
LAWN, AND OTHER GRASS SEEDS,

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All orders for large or small quantities carefully packed and promptly shipped.

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A full supply of choice Garden Seeds always on hand.

Our "Fifth" Annual Seed Catalogue and Almanac (1871) is now ready, and will be mailed free to all applicants.

It contains a Descriptive Price List of the different Vegetables, with directions for cultivation, and much other useful information.

GARDEN SEEDS BY MAIL,

POSTAGE PAID,

At regular Retail prices, and safe delivery guaranteed. (See page 7 of our Seed Catalogue for further information on that point.)

ORDERS SOLICITED.

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jan–tf 1320 and 1322 Cary street, Richmond, Va.

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Richmond Stove and Architectural Iron Works,

1000 CARY STREET, RICHMOND, VA.

First Premium on our COOKING STOVES at the Virginia State Fairs of 1869 and 1870. First Premium on same at the North Carolina State Fairs of 1869 and 1870. Premiums awarded after tests were actually made on the grounds. Thousands can testify that the premiums were well deserved.

First Premium given at the same Fairs for best HEATING STOVES.

First Premium for best COFFEE ROASTER, a very important adjunct to the cooking stove.

FRONTS and GRATES. FENDERS in great variety. HOUSE FRONTS of most beautiful styles. IRON RAILING and VERANDAHS.

Terms reasonable. [jan–3t] SNYDER & IRBY.

WILLIAM KNABE & CO.

MANUFACTURERS OF

PIANOS,

Ware Rooms---No. 350 West Baltimore Street,

BALTIMORE, MD.

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AND THE

BEST INDUCEMENTS!

This Quarter's 13 NUMBERS SENT FREE to all subscribing, before December 25, 1870, for next year's Fifty-Two Numbers of

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THE GREAT ILLUSTRATED

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FOR TOWN AND COUNTRY.

THE RURAL, now in its 21st year, is not only the *Largest, Best, and Cheap* but by far the *Largest Circulating Journal of its Class in the World!* National Character, Ably Edited, Superbly Illustrated and Printed, it is the

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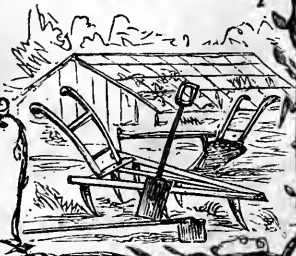
AUGUST, 1871.

The Southern Planter AND FARMER.

VOL. VIII. NEW SERIES NO. 8.

Fergusson & Rady,
Richmond, Va.



THE SOUTHERN PLANTER AND FARMER.

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The subscriber will sell good

No. 1 STANDARD and DWARF PEAR and CHERRY,

two years old, by the 100, and all leading varieties of

SMALL FRUITS,

especially Davison's Thornless Raspberry, and Wilson's Albany Strawberry plants, by the 1,000, at lower rates than any other responsible Nurserymen. Also, any thing in the Fruit or Nursery line at reasonable rates. Address

WILL & CLARK,
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IMPROVED DOMESTIC ANIMALS FOR SALE,

We are importing largely from Europe, and have also bred at home especially for us

FIRST-CLASS DOMESTIC ANIMALS,

such as Shetland, Welsh and English Ponies, (Phætons, Harness and Saddlery suitable for the above furnished when required:) also the celebrated large plow and wagon Norman Horse; Jersey or Alderney, Guernsey, Devon, Ayrshire, and Short-Horn cattle; Cotswold, Down, and Merino Sheep; Berkshire, Essex, Neapolitan (black), Prince Albert, Suffolk (white), and the larger breeds of swine known under the different names of Yorkshire, Lincoln, and Leicester; Poultry of all kinds; Shepherd, Mastiff, Terrier, and other dogs.

We have now in port on board the packet ship Hudson, Captain Pratt, direct from England, the most varied and finest cargo of Domestic Animals ever imported.

R. H. ALLEN & CO.,
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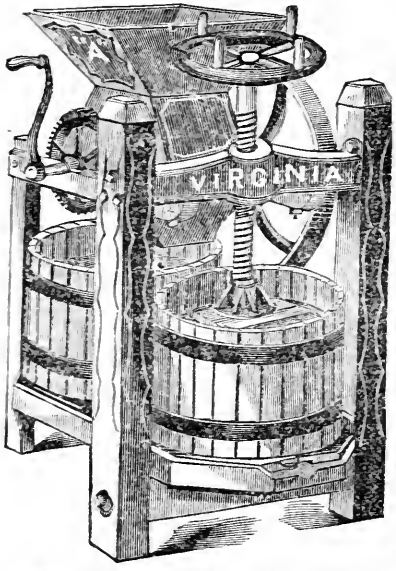

VIRGINIA CIDER AND WINE MILL.

This Mill does not grind or grate but

Thoroughly Crushes the Apple,

breaking every Fruit Cell, and produces

MORE CIDER

from the same amount of Fruit than any other Mill. Every Mill warranted to

GIVE SATISFACTION.

It will mash Grapes, Blackberries, etc. and not break the seed.

No. 1 Mill..... $45 00
No. 2 Mill..... 35 00

☞ For sale by all Agricultural Implement Dealers.

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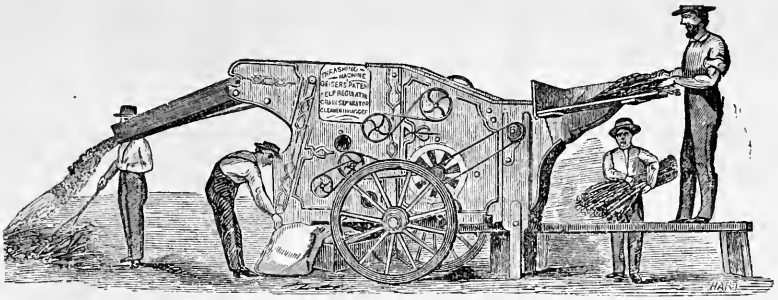

Geiser's Patent

SELF-REGULATING

GRAIN SEPARATOR,

CLEANER AND BAGGER.

See pages 10, 11, 12 and 13 of 1871 Catalogue.

H. M. SMITH & CO.,

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General Agents for Eastern Virginia and the States of North Carolina, South Carolina and Georgia.

This is the most convenient, portable, and best made THRESHER and CLEANER now in use. It threshes rapidly, and cleans more perfectly than any other pattern. It has a SELF-REGULATING BLAST, which makes the blowing over of wheat an impossibility.

This Machine is run by SMITH'S VIRGINIA HORSE-POWER, the strongest and simplest Horse-Power in the country, The Horse-Power can be loaded on a common country wagon, and the Thresher, which is mounted on wheels, hitched behind, the whole to be hauled by one team, making it especially adapted to the use of Threshermen.

PRICE LIST FOR 1871.

WITHOUT POWER.		WITH POWER.	
No. 3	$225	No. 3	$350
No. 2	250	No. 2	375
No. 1	400	No. 1	550

N. B.—The favorite machine is the No. 2, which can be run with any ordinary six Horse-Power, or with Smith's Virginia Power.

july—tf

Orange, Alexandria & Manassas R. R.

DOUBLE DAILY TRAINS.

On and after SATURDAY, July 1, 1871, two daily passenger trains will run between WASHINGTON and LYNCHBURG, effecting double daily connections through between NEW YORK and NEW ORLEANS. At Gordonsville connection is made by mail train with the Chesapeake and Ohio Railroad daily, (Sunday excepted,) to Richmond, Staunton, and the Virginia Springs; at Lynchburg with Atlantic, Mississippi and Ohio Railroad for the West and Southwest, and at Washington for the North and Northwest.

Leave Washington daily at 6:55 a. m. and 5:30 p. m., and Alexandria at 8:00 a. m. and 6:50 p. m., arriving at Lynchburg at 5:05 p. m and 4 a. m.

Leave Lynchburg at 9 a. m. and 10 p. m., arrive at Alexandria at 5:25 p. m. and 6:25 a. m., and at Washington at 6:15 p. m. and 7:25 a. m.

For MANASSAS DIVISION leave Washington daily (excepting Sunday) with main line train, at 6:55 a m., and Alexandria at 8 a. m. Leave Manassas Junction at 9:30 a. m.; pass Strasburg at 12:45 p. m., and arrive at Harrisonburg at 3:40 p. m., connecting with Harmon & Co's Stage Lines to Staunton, Rawley Springs, &c., &c.

Eastward, leave Harrisonburg at 9:45 a. m.; pass Strasburg at 12:45 a. m., arrive at Manassas Junction at 4:00 p. m., connecting with main line through to Washington and the North and West.

Good connections, by comfortable coaches, are made to Fairfax C. H. from Fairfax Station; to Middleburg from Plains, and to Upperville from Piedmont.

Both the Eastward and Westward bound trains make close connection at Strasburg with the Winchester and Strasburg Railroad to Winchester, Harper's Ferry, Capon Springs, &c.

Elegant sleeping cars are run daily between New York and Lynchburg, without change.

Also cars through between Baltimore and Lynchburg, avoiding the inconvenience of transfer in Washington.

Through tickets and baggage checked to all prominent points.

☞ Excursion tickets at reduced rates, good to 1st October, to all the principal Summer resorts of Virginia.

J. M. BROADUS,
General Ticket Agent.

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CHESAPEAKE AND OHIO RAILROAD.

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At Staunton for Lexington, Natural Bridge and Harrisonburg.

At Millboro' for Bath Alum Springs, 10 miles; and Warm Springs, 15 miles.

At White Sulphur Springs for Lewisburg, 9 miles; and Charleston, 109 miles.

THROUGH TICKETS issued to all points North, West and Southwest.

JAMES F. NETHERLAND,
General Ticket Agent.

jan—1t

Accumulated Capital, $331,241 58

SOUTHERN MUTUAL FIRE INSURANCE CO.

Chartered by the Commonwealth of Virginia.

OFFICE---N. E. CORNER MAIN AND NINTH STREETS,

RICHMOND, VIRGINIA.

This Company issues Participating Policies on Farm and City Property, by which the insured becomes a member of the Company, sharing in its profits. Semi-annual Dividends of three per cent., payable to the Mutual Policy-Holders of this Company, declared July 1, 1869; January 1, 1870; July 1st, 1870; and January 1, 1871.

JANUARY 1, 1871.

Number of Policies issued	4,410
Amount of property insured	$6,405,432 74
Amount of Deposit Notes deposited with the Company	273,788 18
Amount of Cash Premiums and Fees received	150,634 94
Amount paid for Losses, Expenses, Salaries, Commissions, &c	93,181 54
Losses adjusted not due	13,932 00

DR. H. G. DAVIDSON, President. H. S. PRICE, Secretary and Treasurer.
JORDAN H. MARTIN, Vice President. J. E. NEISWANGER, Ass't Secretary.

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THE RURAL CAROLINIAN
GREAT SOUTHERN
AGRICULTURAL

MONTHLY MAGAZINE,
Two Dollars per Annum.

64 PAGES READING MATTER.
30 PAGES ADVERTISEMENTS.

WALKER, EVANS & COGSWELL,
AND
D. WYATT AIKEN,
CHARLESTON, S. C.

VIRGINIA SHORT LINE

BETWEEN THE

NORTH AND SOUTH

Via WASHINGTON, D. C., and RICHMOND, VA.,

BY THE

RICHMOND AND DANVILLE AND PIEDMONT RAILWAY LINE,

AND ITS CONNECTIONS,

The North Carolina & Charlotte, Augusta & Columbia RAILROADS.

THROUGH SCHEDULE.

GOING SOUTH.

Leave New York at	9.20 P. M.
" Philadelphia	11.30 P. M.
" Baltimore	4.15 A. M.
" Washington	7.00 A. M.
" Richmond	3.00 P. M.
" Greensboro'	12 32 A. M.
" Charlotte	5.50 A. M.
" Columbia	12.50 P. M.
Arrive at Augusta	6.15 P. M.

Connecting with Georgia Railroad for Atlanta, &c., and with the Central Railroad for Macon, Columbus, Savannah, &c.

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Leave Augusta	7.00 A. M.
" Columbia	12.35 A. M.
" Charlotte	7.00 P. M.
" Greensboro'	1.00 A. M.
" Richmond	11.15 A M.
" Washington	9.00 P. M.

Passengers stopping at Baltimore arrive at Washington in time to take the 7.30 P. M. Train for that city.

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Arrive at New York	6.10 A. M.

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From NEW YORK, apply at the Office of Great Southern Mail Route, No. 193 Broadway; at the Office of the New Jersey R. R. Company, foot of Courtlandt street; at 681 Broadway, corner of Amity street; at Dodd's Express Offices, 944 Broadway, N. Y., and 1 Court street, Brooklyn.

C. BOUKNIGHT,
Supt. Charlotte & S. C. & C. & A. R. R.

S. G. GRASTY,
Agent, Baltimore.

THOS. DODAMEAD,
Sup't Richmond & Danville R. R.

ALBERT JOHNSON,
Sup't North Carolina Railroad.

THE SOUTHERN

PLANTER & FARMER,

DEVOTED TO

Agriculture, Horticulture and the Mining, Mechanic and Household Arts.

Agriculture is the nursing mother of the Arts.—XENOPHON.
Tillage and Pasturage are the two breasts of the State.—SULLY.

JAMES T. JOHNSON, }
JOHN M. ALLAN, } - - - - - - MANAGING EDITORS.

New Series. RICHMOND, VA., AUGUST, 1871. Vol. V---No. 8.

Agricultural Department.

The Wheat Crop

In this State, and under our system of farming, does not, under the most favorable circumstances, show a large percentage of nett profit. It is always, as a Wall street man might say, a close operation. The outlay for seed, preparation of the land, harvesting and getting ready for market, make it a costly crop; while the many diseases to which it is liable, the insects which ravage it, and the accidents to which it is exposed, make it an exceedingly precarious one.

The difference between profit and loss is so small that it is often hard to determine in a given crop where the balance is, and if farmers would calculate closely beforehand, it would require considerable boldness to commence an undertaking in which there is so much risk and so little prospect of gain. But while the small profit or small loss may not materially affect the condition of a farmer who is raising other crops and has other sources of income, the question of profit or loss is of vital interest to the State at large, and in the aggregate amounts to an immense sum. In 1869 there were 823,000 acres in wheat in this State, which yielded 8,642,000 bushels—about 10½ bushels per acre. If there had been a profit on this crop of $2.50 per acre, the aggregate would have been something over $2,000,000, which would have contributed materially to the general

prosperity of the State. But if the crop cost that much more than was realized from it, the loss would be great enough to cause all the scarcity of money from which we have suffered. The use of commercial fertilizers, at the prices we have had to pay, constitutes an important item in the cost of wheat growing; and as there was less used in the crop just harvested than in preceding years, we may hope for more clear gain, although it failed badly in some sections.

But wheat will continue to be grown, whether or not there is much made by it. It is an attractive crop, because it always commands a cash price, and is always in demand at the market rates. Everybody wants it, and, we may say, must have it. Therefore, we must renew our efforts to make it profitable, and there is no time to spare now in preparing for the next crop. The theory or rather theories of wheat culture are well known to probably three-fourths of our readers, but those who attain a moderate share of success constitute a much smaller number, and this is only another evidence of how little theory is worth in the hands of those who have not been *trained* to apply it.

One error, which is very general, and which is easy of correction, is the seeding of too much land. Let any man, after calculating how much land he can prepare with the force at his command, make up his mind to reduce the quantity one-fourth or one-half, as the needs of the case may be, and expend the same time, labor and manure upon the remainder to put it in the best possible condition, and there would be no risk in guaranteeing a larger percentage of profit than if the whole land had been seeded in the usual way.

Another fertile source of bad crops is poor seed. We asked last year that some of our readers should try the experiment of sowing a small portion of ground, prepared with extra care, especially for seed, and if any one thought proper to adopt the suggestion we should be very glad to hear the result.

Other things being equal, the earliest matured wheat should be chosen for seed, and of this should be taken the heaviest grains. These can be separated without much trouble by throwing the wheat in small parcels across a barn floor, and against a slight wind—those grains reaching the farthest point being, of course, the heaviest.

Goodwyn Agricultural Club.

The Club met at the residence of Mr. J. H. Davis, May the 27th, 1871. The President in the chair. The proceedings of last meeting were read and adopted.

Mr. R. A. Hamilton stated that up to the present time he had been able to gather nothing of real interest upon the Railroad question. The President of the Danville road and its Board, have had this question frequently called to their attention so far as the Keysville and Clarksville line goes, and thus far without avail. With our project as a continuation of that line, it is entitled to, and will receive more attention than one so limited, comparatively, in its views and results. I therefore venture to suggest to the Club, that a committee be appointed to send a communication to Col. Buford, accompanied by the statistics of the section through which the proposed road will run, and such other matter as may be important and pertinent to the subject, and ask that he will lay it before his board, and that his influence be respectfully invited to bring it to the attention of the Pennsylvania Central, and that said committee take into their consideration and adopt such measures as may most speedily and effectually place before the people of the City of Richmond a knowledge of the resources of this section of country, and the deep interest they have in promoting our views. A narrow gauge road, 3 feet, costs, according to authoritative estimates in my possession, not $\frac{2}{3}$ of the broader gauge of 4 feet 8 inches, and will answer all purposes until increased production and prosperity render greater facilities necessary. As to the Petersburg and North Carolina Railroad, he thought it stood no showing, and besides we could not hope to divert it from its proposed terminus to Greensboro.

Mr. Venable gave some statistical information about the resources of Granville, and stated that he had oftentimes had his tobacco hauled to Petersburg by the Orange & Guilford wagons for from 65 to 75 cents per hundred. He considered the railroad freights an extortion.

Mr. W. Lewis agreed with Mr. V., and gave the figures upon some recent shipments of tobacco that he had made.

Mr. E. H. Hicks thought we were about to be swallowed up in toto. The progress of events was surrounding us with a net-work of monopolies. If rings were the order of the day, it was useless for us to repine. We must learn to stand up and stand together under these money drains and hard oppressions. We needed more information, more

knowledge of our own rights, and we lack sadly the spirit of co-operation. Our present railroad is nothing more than an incubus. We had better ourselves start the wagons than submit to them. Another great difficulty is that we are about to die of too much land. We must work to try and get rid of it, in order to secure cash capital to carry on our business. It is the only way to control labor. We are operating now in too much of a hand to mouth manner. Our railroads instead of inviting, serve but to deaden the flow of immigration. Though we must persevere in our railroad scheme, it brings our section into notice and creates competition.

Mr. Venable did not wish to be understood as being opposed to railroads, but he wanted to see an alteration in the system. Raise stock, and change our system of agriculture, and it would be the most effective means to bring about what we so much desire. These roads have no right under their charters to these exorbitant charges. There is not a day but what they are violated. We must have a crop that don't require any steam or sail, something that can walk to market. There is nothing more profitable than stock, and especially when these taxes are upon our products.

Mr. E. H. Hicks thought stock raising a leader in the wrong direction; rather let us raise our own mules and then we can make what we choose and haul it to market. Though if the toad don't get out of the way of the harrow it is very certain he is going to be harrowed to death, and if we don't use our brains and energies and learn, we, too, must go under.

Mr. Gregory said he didn't have any idea of allowing this subject to be run off on railroads. They are secondary. We have got some railroads, but we have not got *any* combination. I regret that the gentlemen appointed on this subject to-day, are absent and unprepared. In recurring to it again I must say, though, that the interest and the earnestness it awakened at our last meeting was most highly gratifying and pleasing, because it told me but too well that I was right in thinking and hoping that this was a subject over which we could all shake hands, and I am led to-day to think more than ever that it will yet have a live working existence amongst the members of the Goodwyn Club. We must rouse up and let large farmers and small farmers, rich farmers and poor farmers, all be found clubbing together, demanding and securing rights that we so much need and are so justly entitled to. I want to see some fairs for the benefit of farmers; I want to see some legislation and law-making for the benefit of farmers. We can get anything we want if we but will it. We are the strongest, and yet we are the weakest class, so to speak,

and because there is nothing cohesive about us. Good times or hard times, somehow you can see and hear of lawyers, doctors, merchants, men in most every class, becoming rich and prosperous; but not so with the farmer; let it come a good or bad crop, his condition these times is much the same, and there is certainly nothing to blame anybody else for; most assuredly the blame is upon our own shoulders if we will but think about it.

There is certainly something wrong. There is certainly a crack in the hog-trough somewhere. Notice an individual who gets the patronage and handles the produce of a few farmers for perhaps a few weeks or months, and he will get fat and sleek, and those same farmers will toil day after day, and month after month, and hardly make a decent living. I dont propose to quit work because these things are thus. I simply want to bring farmers to think. Let us have clubs throughout the land, and we can eradicate error, revolutionize the farming interest, and be what we ought to be, a recognized, controlling power in the land. It seems to me if any class can be a preferred or privileged class, the farmer has the best right. Because there is not much danger of his becoming a monopolist, or oppressor. His prosperity hurts nobody, but on the other hand benefits everybody. Upon the subject of railroads, Mr. Chairman, in my zeal the other day, I forgot to say anything about those we already have, and to add that ours was to be more on the mutual plan. It may sound odd; it may appear even ridiculous for a backwoodsman, in such a dense forest, so free from the footprints of civilization, to be talking about railroad polity, but then we are entitled to our *say* if nothing more. I don't think my language is extravagant, or is anything more than what it should be, when I say *our* railroads are almost a *curse* to us. They are frauds upon us; they falsify us in their high tariffs, in having it believed and the impression to go out that our country is too poor and that we are too poor and unskilled farmers to keep up a road on moderate freights, when really the reverse of what they would have believed is the *truth*. For who, I ask, but good farmers, upon the best most blest land, could stanch the stomach or satisfy the blood-letting appetites of such heartless monsters? The leading, or the almost only idea, seems to be now through freight, and how short-sighted this does really seem when railroads are being projected and so extensively built. This through freight is liable to be tapped and turned off at many points, and then what becomes of the road whose reliance has been mainly upon it? What has our railroad, the Raleigh & Gaston, done for the country along its line? Could it in an emergency keep up on freights of

its own making? Are the people any more prosperous? Have they learned to bless it for their cheap freighted fertilizers and their returning farm products? Only a convenience, but its too dear for the whistle. The city people ought to take the matter of railroads in hand if they want cheap Irish potatoes, onions, eggs, chickens, butter and a thousand things they would get did they but little more than pay the freight; and farmers must help them too, by taking legislation in hand (and that soon) and controlling these monopolies, or else they will ruin farmers and legislation too. Talking, Mr. Chairman, upon these progressive subjects, reminds me to express my obligations to our conscript father (watermelons), "Old Iron," for his complimentary notice in the last *Planter and Farmer*, and further, I am glad to see him wincing under that old mill story. It is a healthy symptom. I have no doubt his fears and feelings are very much akin to those of our otherwise very worthy President, about the tendency we progressiveites propose to give to agriculture. I would be tempted to enlarge upon him and his "foolery," but there is so much of the same ore nearer home I forbear. I give him full credit, though, for supplying to our magazine a very useful and much needed feature.

Upon reading the above at a subsequent meeting, Mr. Gregory begged leave to say, since the appearance of the last *Planter and Farmer*, and since he would not be allowed to scratch it out, that he believed now his friend was a true soldier, and hoped for the future that they might understand each other better. He knew it was as much necessary to have a keen whip for fast-going horses as it was to crack up the old ones. He hoped his friend would keep his well in hand and use it whenever he thought it necessary.

NATHL. A. GREGORY, *Sec'y.*

The Map of Surry.

Messrs. Editors,—The *Map of Surry* has been upon my table some weeks, during which time I have given it repeated examination. I have also shown it to several persons well acquainted with the topography of the county, and I am sorry to say that quite a number of errors have been detected. I will, as briefly as possible, point out some of them.

Cobham bay should read *Chipoax* bay. White Marsh swamp near Moore's Swamp church should be *Moore's* swamp. The same stream lower down is called Mill swamp.. Dill's mill should read *Gill's* mill.

McCurriman's store should read *McGureman's* store. Cobham should be located on the east bank of Gray's creek at its mouth. The southeastern corner of the county should be bound by Southampton. Isle of Wight extends only *to* the Blackwater. The boundary of the southwestern corner of Cobham township should be laid from Collier's store down by McGureman's to Moore's Swamp church. Several mill sites are omitted. The Burrough, the Glebe, and Lebanon, Crouche's, and Old Surry churches are all omitted. It is a source of regret that the locality of the Old Surry church had not been marked. It is a hallowed spot to many of our citizens, for there repose the dead of many generations. It should have been placed on the south side of the road, about half way between St. Andrew's church and Warren's store.

But the most glaring defect of the Map, and that which detracts most from its value, is the location of the roads.

Several of the roads are wrongly placed, as is the Hog Island road, which is laid too near to Lawn's creek. It should run along just by the eastern front of Bacon's castle, and thence down nearly parallel with Chipoax creek to Hog Island. The road laid down just to the *west* of Bacon's castle has no existence. Several of our main roads are indicated by a single hair line, while some obscure paths, not known as public roads here, are marked by double lines. There is no public road—hardly a foot-path—leading from the Smithfield to the Stage road anywhere between the Chipoax road and Surry Court-house.

But I cannot undertake to point out all—or half—the errors in the location of the roads. Suffice it to say, that I should not undertake to travel from one part of the county to another with *this* Map as a guide.

And now as to the description of the county accompanying the Map. Of course all the places where "Cobham" bay is mentioned it should read Chipoax bay. On page 1, eleventh line from bottom, for "northwest" read northeast. Same page, ninth line from bottom, the word "northeast" should be north. Same page, eighth line from bottom, "White Marsh and Terrapin swamps;" these, as will be seen by a reference to the Map, are in *Blackwater*, and not Guilford township. They drain no part of Guilford township.

It is stated on page 2 that there were, in 1860, thirteen churches in the county—nine Methodist and four Episcopal. There were then, and are now, two or three Baptist meeting-houses. Certainly there are *not* thirteen churches at which services are held *now*. Would that there were. They are needed.

A word as to the temperature and rain fall of this county, as reported by myself to the Smithsonian Institution. My observations have been continued regularly three times daily since May, 1867; and I find that we do have "great extremes of temperature, and a high mean, compared with the rest of the State." On the 11th of July, 1869, the mercury of my thermometer, situated in the shade, and protected from radiation, went up to 104°, and remained at that point two hours. The column reached 100° and over on seven days of the same month. At seven o'clock, a. m., of December 25, 1870, I found the mercury 4° *below* zero. So it is seen that this county has a range of temperature embracing 108° of Fahrenheit's scale.

The rain fall, as I reported it, does seem to be "excessive." But I am satisfied that even my figures are below the truth. I took no notice of evaporation or absorption—my gauge is a wooden one; and when the fall did not amount to *one-tenth* of an inch it was not counted at all. I am confident that the average annual rain fall of this county is not far from sixty inches. But I shall be able in a few years to put all these questions at rest, when I come to sum up the results of my monthly observations.

And now, I would say in conclusion, that Professor Hotchkiss' Map of Surry is not as correct as it could and should have been. Correct maps of the different sections and counties of Virginia are sadly needed, and I trust that they will be forthcoming from some source at no distant day.

B. W. Jones.

Cottage Home, Surry, Va.

Farmers Convention.

Messrs. Editors,—At a meeting of the Riverside Agricultural Club, held at the residence of Z. R. Lewis, the following resolutions were unanimously adopted:

Resolved, That we concur in the call from Buckingham, Cumberland and Powhatan for a Farmers Convention, that we will send representatives from our Club to *such* a Convention; and furthermore request the members to interest themselves in their several counties in behalf of this movement.

Resolved, That Secretary send a copy of our action for publication in *Southern Planter and Farmer*, and such papers as he may think proper.

A. J. Bondurant.
Secretary.

A correspondent writes:

"Will you please inform me where I can buy native sheep worth the money. I make this request as I am a comparative stranger here."

[We are constantly in receipt of such communications as this, and would advise those of our readers who have stock of any kind for sale to advertise it in the *Southern Planter and Farmer*. It is read by progressive farmers everywhere in this State and largely in other States.]

Wheat Growing in the Old States.

Levi Bartlett gives it as the result of a dozen years' experience in wheat growing, in New Hampshire, that "winter wheat is as sure a crop in that State as out West or anywhere else. We believe that many of the best farmers in our State can testify to the same experience; and probably none but the best farmers can. Judgment is required in the selection of proper soil for the wheat field, and the best cultivation must be added to make the crop profitable. These requirements are never met by the poor farmer, and it is but natural therefore, that he should give up wheat growing in this and other old States as uncertain and unprofitable. Even the best farmers in these States can not hope to compete with those of the West in supplying the markets with wheat. Here we find but a few acres of each farm that are adapted to wheat, and can profitably be given up to the crop, while in the West, whole farms are suited to the crop. Our farmers can make it profitable to raise wheat for their own use, but not for marketing to any extent. But to gain even the former end, careful and intelligent management is required.

In the first place, only the best seed must be used. It is not necessary to run after new varieties, nor to keep constantly changing. Many of the old standard sorts may be grown on the same farm for years with the best results, if a careful selection of seed is annually made, and the soil and manure is adapted to the crop. Mr. Laws, of Rothampstead, Eng., has grown the same variety of wheat, on the same plats of land, for thirty years, with an average yield of over thirty bushels to the acre. But the selection of seed has been carefully made, and the cultivation has been thorough. In illustration of the results of such favorable management, Mr. Bartlett gives the experiment made by S. C. Pattee, of New Hampshire. "Last year," he says, "after his wheat was harvested he threshed out two bushels with a flail, only threshing what could be 'shelled out' without untying the bundles or sheaves. The two bushels were carefully hand picked and

put by for last year's seeding. The remainder of his wheat was threshed by a machine propelled by water power. Last spring Mr. P. sowed the two bushels of flailed and seven bushels of machine-threshed, all in the same field, all of the conditions of the two kinds, from seeding to harvest, precisely alike. The flail-threshed has by careful estimate, yielded 33⅓ per cent. more wheat to the bushel of seed sown than the machine-threshed; and in the judgment of Mr. P. and many others, three pecks of the flail-threshed gave more plants than four pecks of the machine-threshed seed.

Here is the result of a carefully conducted experiment in wheat growing; and this result is worth heeding. Those farmers who wish to obtain the greatest returns for labor expended, will follow Mr. P's example in the matter of seed wheat."—*Utica Herald.*

Town and Country.

We have not yet seen a single instance of a city or town in the United States, large or small, that has been completely successful in developing as large an aggregate of population as had been calculated upon, unless, perhaps it be St. Louis, which, being determined to become the national capital, has by some occult species of arithmetic outcounted Chicago. The lesson is one that ought not to be forgotten by the townspeople, for of late years their conceit has been boundless, and they have even gone to the extent of deploring the rush to the cities as depopulating the rural districts, when in fact there was no such rush, and on the other hand the people have gone to the agricultural districts, as is shown by actual facts.

We believe that many of our cities would have grown and prospered very much more if they had devoted more of their attention to the development of the resources of the country districts tributary to them, and less to the blowing of their own trumpets and the manufacture of idle illusions. In no part of the Union have the leading cities been so remiss as here on the seaboard, where the time of the metropolitan journals has been divided between inflated eulogies on the amazing progress of the remote West and preposterous calculations of the greatness of their own cities. We remember seeing in one leading Philadelphia paper a long article representing that the city was suffering in consequence of the removal of some iron shipbuilders to minor places on the Delaware, just as though Philadelphia has not always been the irresistible metropolis for all such towns.

Millions of capital are constantly afloat in the money-markets of these great cities seeking investment, that if applied to the develop-

ment of the resources of the neglected districts tributary to these cities would bring in large profits and produce valuable results. If productive industry be so valuable as is supposed, it is as desirable in the country towns as in the large cities, and there are many locations in the country where water power is accessible, or where property and labor as well as living are cheap. Agriculture in this eastern region would be in a far more prosperous condition if the farmers could have provincial markets in their own neighborhoods for their produce, instead of being obliged to sell everything to the dealers in the great cities. We cannot say that we desire a general extension of wealthy fancy farming, which really accomplishes little for agriculture. But if every town and village had a valuable produce market based on the consumption of industrial establishments, the progress of farming would be much more rapid and gratifying. The main idea we wish to inculcate is that our farmers should learn to look less to the great cities and more to the rural towns and minor cities with a view to the development of local markets for their produce. At present the commission dealers in the great cities have brought the trade to such a state that the farmers make little profits although prices remain always high.—*Germantown Telegraph.*

Farming as a Business.

A man who is not smart enough to run a store is not smart enough to run a farm. Farmers are not to be made out of what is left after lawyers, doctors, ministers and merchants are sorted and picked out. And if a man fails on a farm it is not likely he will succeed in a store, for it requires more talent to be a thriving farmer than to be an average merchant. The one cause of great failure is the disproportion between a man's farm and his capital. A farmer's capital is skill, labor and his money. If he has little cash, he must have no more land than he can thoroughly manage by his personal labor. Every acre beyond that is an incumbrance. One acre well worked is more profitable than twenty acres skimmed over. It is this greed of land by farmers that have not the capital to work it that keeps so many poor. Small farmers are better than large ones, simply because they are better suited to the capital of common farmers. Large farmers with large capital are better than small ones. Farming is a good business for all men who conduct it on proper principles, and have capital according to the size of their farms.—*Farmer and Artisan.*

How the Iowa College Farm is laid out for Experiments.

About the first thing done was to lay out the ground, which was done as follows: The whole was divided into blocks of equal size and shape, each one being one hundred and sixty feet on the front, (*i. e.*, on the south side,) and two hundred and seventy-two and a fourth feet in length, north and south. This makes each block contain one acre, and the shape gives exactly one square rod for each foot of front, making the estimate of crops easy and rapid. There are nine of these blocks, all separated by drives fifteen feet in width. With this arrangement, it is easy to go to any part of the garden with a team, while at the same time the rows of crops are sufficiently long so that the horse hoeing can be profitably employed.—*Pomologist.*

Preserve the Water.

[The best preservation of the water that falls is to have the land deeply ploughed and subsoiled. This means is within our reach.—Ed.]

An English paper suggests that agricultural associations try and discover some means of preserving the surface water on which the food of the country depends, instead of, as now, allowing it to run to waste. The writer urges that seasons of drought may be expected, that on each farm there should be a reservoir to be used in stimulating growth in dry weather. The only way to provide against the damage that the drought inflicts upon our crops is to store the water that we allow to run to waste. We use fertilizers to increase the harvest of our soil, and it is claimed that we should also bring the skies under our control for the same purpose. We admit that we here have a vast field for improvement in our system of agriculture, but is not the field a little too vast for ambitious man to grasp and turn to a practical use?—*South-Land.*

Harvesting Hay Early.

In 1859 the hay crop in the United States amounted to 19,129,128 tons, worth at least $191,291,280. Eleven years has increased this by at least one-third, so that the crop in 1870 was at least 30,000,000 tons, worth $300,000,000. Making a low estimate, one-sixteenth of the value of this crop is lost by late cutting. And yet the practice so costly is surprisingly common. Were argument necessary to convince farmers of their mistake and loss, attention might be called to

that wonderful and most suggestive provision of Providence that in almost if not all sections of the world where cattle depend upon wild grass for winter as well as summer food, sudden and great heat and a correspondingly dry atmosphere combine to change the grass into what civilization calls hay while in the fullness of its growth and always before its maturity; and thus it is that when for months not a green thing is eaten by the herds of roving animals, they are found to be in better flesh at the end than at the beginning. If the grass reaches completeness in its growth and seeding before being dried, cattle eating it would die of starvation rather than thrive.

Science as well as observation demonstrates the necessity of an early hay harvest. Grass is the natural food of animals, and before the plant reaches its maturity it contains all the elements needed to make a perfect aliment in the best possible combination and in the best possible proportion. Afterward the nature of the plant changes, and reproduction, not force—if we may put it in this phrase—becomes the ultimate object. If, therefore, farmers would secure the best and most valuable hay crop, grass should be cut while the seed vessels are forming, and never after they are formed. Haying, therefore, should be commenced on the average, ten days earlier than it is. There may be a little loss at the beginning in bulk, possibly in the weight, in consequence of the immaturity of the crop; but the loss would be none at the end, by the change in the nature of the plant from a juicy, saccharine combination into something that acts simply as a stiff, horny holder for the vessels containing the matured seed.—*N. Y. Farmers' Club.*

[A recent trip through some of the best hay counties in the State demonstrates that our farmers are not free from this error of late harvesting the hay crop. As late as July 12th we saw good crops of timothy still standing, and as dry as sticks. One day's sun on this grass after being cut will render it almost worthless for feeding. Ed.]

Piedmont Agricultural Society.

This Society, recently chartered, promises to attain eminent success, and commends itself to the farmers of the Piedmont section and the State, both by the objects it proposes and the measures adopted for obtaining them. It is a joint stock company, the maximum capital to be $50,000, distributed in shares of $25. In the counties of Orange, Culpeper, Madison and Fauquier $35,000 of the stock has been already subscribed, ensuring the success of the enterprise.

Besides regular exhibitions and fairs, this Society proposes to establish an experimental farm, and eventually combine with it a practical agricultural school. Such action is what is most needed at this time in Virginia, and we wish these gentleman the highest success. In no part of the State could such an enterprise be attempted with better prospects. The land of the first quality, the climate diversified, both soil and climate adapted to the production of grain, grass, cattle, as well as all kinds of fruit, the farmers enterprising and intelligent, it can by no possibility result in anything but a grand and useful organization. We shall be glad from time to time to note its progress, and hope that other portions of our State will follow the example here set them.

A number of the members of this Society are subscribers and contributors to the *Southern Planter and Farmer*, and we hope that every member will soon imitate the example of their confreres and thus add to the usefulness of our journal, while, as we believe, benefitting themselves.

Leached Ashes Preferred.

Seven reasons why the result of experience compels practical farmers to choose this variety as manure.

1st. If they do no good during a dry season—or in the absence of mulch or vegetable matter—they do no harm. Whereas in proportion as unleached ashes abound in potash, they are injurious to all vegetation under these circumstances.

2nd. The removal of the potash by the soap boiler enables him to add good lime, and leave a remnant as caustic potash to react more vigorously on the coal ashes, (usually present) and liberate certain manures otherwise locked up and worthless. Moreover saturate every particle of this adulteration with this invaluable element, worth seven times as much as any salt of potash, (especially chloride or mineral salt) the leaching must be arrested when it will no longer pay to evaporate the weak lye, made by commingling caustic lime with the carbonated alkali in the ashes, and the resulting magma is a uniform mineral compost, "indicating clearly the most economical use of lime, and the enormous annual waste by the farmers as usually applied—competent (if saved) to pay the taxes of any State on our seaboard. The recognition of these points by farmers of this century is possible, but it is not probable that they will be appreciated as above. The idea of co-operation of manures is not easily com-

prehended by the most intelligent men of the present age. For instance we detect "educated men," in comparing the effects of wood ashes and stable manure separately!! on the hills of corn, during a dry spring, when a mulch necessarily included in the latter would equal ether manure alone, the result of such observation is worth about as much as the test of the relative value of ship biscuits as a food for crews scantily supplied with water, one of which has a cargo of bacon.

If a field is uniformly manured with stable manure, and one row is topped dressed with ashes, then its effects can be noticed, so, also, the presence or absence of over 50 pounds of superphosphate may be noticed in doubling a crop of wheat year after year. It was my impression that the mere acid re-action on the seed might produce the effect, as a difference of one day in drilling the same field will sometimes produce equal results—but the same man demonstrated the same corresponding influence the next year between the effect of 150 and 200 pounds on the centre of his field, as perfectly manifest. It seems incredible that insoluble coprolite, containing no ammonia or anything else but four per cent of phosphoric acid, and a little plaster as the result, should accomplish this wonderful result!! but this was co-operation, so, also, we argue for leached ashes, viz:

3d.—The remnant of caustic potash reacts gradually on the insolvent phosphates (always present in wood ashes) and not only divides, but actually dissolves them—to illustrate this I have immersed a number of large bones in such a magma in a barrel for a year and demonstrated the cheapest bone mill for the farmers, exclusively home manufacture.

4th. The finely divided silica is dissolved also by the caustic potash, and this I have abundantly proved by introducing a piece of mica or the material used as glass in stoves; the part submerged will soon disappear, leaving a few scales or an attenuated sheet of half thickness. Mica is the same as Windsor glass, or green sand, (a silicate of potash) but this potash is insoluble, and beyond our reach as water in a well or barrel, unless we are accidentally taught to elevate its level as when a rock or stone falls into it. So also this residue accidentally left in the leached ashes as *caustic* potash teaches us the cheapest mode of obtaining the potash and phosphates of green sand, &c. In other words, old practical farmers frequently reiterate (see last *Planter*, p. 354,) the superiority of leached ashes over unleached as manure, viz: "*just as good*," but half the price and seven times *more* valuable, because *practicable* or obtainable in unlimited quantities. Again, every tyro is familiar with the fact

that if wood ashes are slacked in a tumbler it is soon ruined, and much sooner if lime is added, and the ruin that results is precisely the same principle as the illustration above with the rock of the well, viz: glass is an insoluble salt of silicic acid and potash, but soluble when more of the latter is added. Thus the old fogy chemists made what they called the "liquor of flints," and the late Dr. Troup, of Baltimore, assured me when a mere boy that he noticed that even the mild bicarbonate of soda destroyed the inner surface of a wine glass from which he frequently used the dose. Soda is used by the collectors of ashes to deceive the soap boiler, who tastes coal ashes seasoned with this cheap alkali, and thus farmers suffer more from the adulteration with soda than with coal ashes, because the latter may be made a manure, but the soda is worthless comparatively, except for asparagus or sea plants.

5th. Leached ashes may be sold at less than cost, especially in view of the peculiar value of potash, such as the ashes of wood yields, in comparison with mineral salt of potash in commerce. Even by the ton it is uniformly quoted 16 cents per pound, or $3.20 per ton, as commercial potash only contains one-half alkali.

6th. The supply of wood ashes unleached is inadequate, but leached ashes may be regarded as inexhaustible practically, and at least 10 per cent. is saved in barrels, which are absolutely necessary to economise all fertilizers which the farmer pays more than $10 per ton for.

7th. They contain all of the elements of soil plant food more uniformly insured to every particle, and every particle is perforated infinitely, and more soluble and accessible to the rootlets, for manifest reasons apart from No. 1, &c.

DAVID STEWART, M. D.

Port Penn, Delaware, July, 1871.

NOTE.—One of my neighbors has recently purchased a lot of leached ashes, which has afforded me a chance to obtain a sample composed of many specimens taken from various parts of the heap on his farm as delivered.* This sample taken below the surface, mingled sifted; pulverized and again repeatedly mingled, yielded the following result, which should serve as a rare caution to farmers, especially as neither the purchaser nor the vendor knew of my intention to get the sample. No reliance should be placed upon the analysis of the most expert chemist with regard to any fertilizer, unless sampled in person from packages certified. Much less reliance can be placed on articles sold in bulk unless

sampled as above. I notice recently much interest expressed in several agricultural journals about the relative value of mineral fertilizers, ancient and modern, and I hope to prove all these theories incorrect by a few extracts from an article headed "Nascent Manures," republished in the annual of Scientific Discovery for 1855. Composts made on the farm are as old as Virgil, and they produce nascent manures with the co-operation of ashes and other domestic resources. D. S.

**Result of analysis of sample of several tons as delivered from Baltimore at the farm of Mr. John Patterson, on Chesapeake and Ohio Canal:*

Moisture, . . .	27.6
Alkaline salts, . . .	02.8
Other elements, . . .	69.6

The alkaline salts contained only a trace of potash, 0.9, or not quite one-tenth of one per cent, (about as much as a good soil should yield) consequently this is not worth the cost of the freight, and I fear represents a large part of that supplied to our peninsula, occasioned by the extraordinary demand. Farmers can make much richer composts from the products of the farm at half the cost with the aid of the ash heap. D. S.

How to Apply the Ashes.

On this point the experience of farmers differs greatly; some prefer broadcasting, others sowing in the hill. For wheat, of course, broadcasting, and we think that this system is in all cases really the best, as though perhaps not bringing such immediate results, it undoubtedly benefits the whole mass of the soil and is more permanent. Many contend that the ashes should be composted. A compost we have seen and which we can recommend is: Ashes, 25 bushels; plaster, 10 bushels; lime, 10 bushels; animal manure, 40 to 50 bushels. Another is: One bushel of plaster and five of ashes mixed, leached and unleached. We are of the opinion that whenever applied, unleached ashes should be mixed with ground plaster. This has a tendency to correct the great solubility of the potash, and acting on each other produce new, slower acting, and more valuable materials. Wood ashes composted with swamp muck correct its acidity and is itself benefitted; hence, on loose, boggy soils we suppose its action beneficial, yet as such soils seldom need fertilizing but merely warming, the cheaper lime will answer for them. A compost made of

wood ashes and cotton-seed cake would be a valuable manure, and a mixture of 15 bushels of ashes and 15 of ground bone would be an excellent union. An English writer recommends ashes moistened with train oil. but cotton-seed cake or fish would be as cheap and better.—*Prof. Colton in New York Tribune.*

Fire-Fanged Manure.

A correspondent of the *Carolina Farmer* tried the experiment of using fire-fanged manure upon potatoes, comparing its action with some which had not been heated, and also with unmanured land. The result proved that it had no effect at all. It is not long since we saw just such a load of manure being hauled a distance of six miles into the country.

Dissolving Bones in Caustic Lye.

To accomplish this it is necessary to break the bones into fragments and pack them in a tight shallow box with an equal weight of good sound wood ashes. Mix with the ashes, before packing, twenty-five pounds of slacked lime and twenty pounds of sal soda (carbonate of soda) to every one hundred pounds of the ashes. The box in which to conduct that process may be made of rough boards, but it must be tight, and it should not be over eighteen inches deep. It may be as broad as necessary. The bones should be packed in layers; first upon the bottom a layer of ashes, then a layer of bones, and so alternately until the box is filled. About twenty gallons of water must be poured upon the heap (that is, for every one hundred pounds of bones) to saturate the mass, but more may be added from time to time to maintain permanent moisture. In three, four, or six weeks, the bones will be broken down completely, and the whole may be beaten up together, after adding an equal bulk of good sifted soil. This compost is of the highest efficacy, as it embraces quite all the great essentials of plant food. namely, potash, soda, lime, phosphoric acid, and the nitrogenous element. This is a very convenient way for farmers who have ashes, to dispose of their store of bones. If plenty of ashes can be procured, it will facilitate the decomposition of the bones to employ *twice* as much ashes as there are bones; the solution will be effected sooner, and more perfectly.

If powdered bones are employed, a barrel of the powder may be mixed with a barrel of good ashes, and the whole turned into the half of a molasses cask, moistened with two bucketfulls of water,

and stirred up well with a hoe. In a week this will be ready for use, and it forms a most efficient and convenient fertilizer for all the cereal crops. We think it does more for corn, in giving plump, full kernels, than any concentrated fertilizer we have employed. A handfull is enough for a hill, put in it at the time of planting. Before dropping the seed, a little earth should be kicked over the powder, so that it may not come in direct contact with it.—*Boston Journal of Chemistry.*

How to Send Grain to Market.

It is unaccountable to me that so many farmers have not yet learned how to send hay and grain to market, so as to make them pay the most profit. I see boat loads and car loads of such produce passing through my neighborhood on its way to your city, hundreds of miles distant. It brings prices that would make a Western farmer's pocket jingle merrily, only that a large part of the money stops in the hands of the transporters, to pay freight. Now railroads and canal boats are excellent institutions, but I have never yet found so good a way to send corn to market, as on the four legs of a well fattened animal. A bullock or a hog will pack away a few bushels of corn more snugly than any freight master could do, and it brings better prices after they have worked it over into beef and pork, than in the raw state. With the exception of wheat, and perhaps rye, I would not sell a peck of grain from my farm, except for seed. Along in the summer, when pasture is scarce, and plenty of cattle are to be picked up, I secure enough to consume all the corn I can spare, over what will be needed to fatten my hogs, (these I raise at home,) and just before cool weather commences, I set the beef factories to work. The chips give me profit in the shape of manure, enough to make the operation pay, even if I could only get the same price for the grain as before feeding it out; but there is a gain here, too.

When I read about Illinois farmers and others using corn for fuel because it is cheaper than coal, I think they need instruction on this point. If they have not capital enough to buy stock to eat up their grain, let them *borrow* the cattle, and agree to return so many pounds of fattened beef, for each animal, in the same way that sheep are taken on shares; it would be mutually beneficial to themselves, and to those who have more animals than they can keep profitably. I know that many men living on new lands will laugh at the idea of using manure, but the laugh will be on the other side not many

years hence, when their lands begin to show signs of weakness, as those of Western New York have done. It is very easy to *keep* a soil fertile, but a slow and costly operation to restore a worn out one. But whether the manure will be used or not, I believe it will be found to pay to feed out grain before sending it to market.—*American Agriculturist.*

Colts or Calves.

The following from a correspondent of the *Maine Farmer*, is one of several estimates going the rounds:

"I send you a few figures that may give some information or raise some further questions in regard to the profit or loss in rearing or keeping the same on farms.

Cost of one Colt.	Dr.
To sire,	$10.00
" use mare	25.00
" Keeping first year,	25.00
" " second year,	30.00
" " third year,	35.00
" " fourth year,	40.00
	$165.00
Credit, by value of 4 years old colt,	$150.00
Loss,	15.00
	$165.00

The use of the colt the fourth year will pay for the expense and trouble of breaking and training.

Cost of two Heifers.		
Sire,		$2.00
Use two cows,		20.00
Keeping first year,		20.00
" second year		35.00
" third year,		40.00
" fourth year,		50.00
Sire fourth year,		2.00
		$177.00
Credit by 2 calves,	$ 20.00	
By 300 pounds of butter,	100.00	
Value of cows,	100.00	
	$220.00	
Profit,	43.00	

The sour milk will pay for the extra labor of making butter. If my figures are too high or too low, I shall be very glad to be set right by some one of your many intelligent correspondents."

Weaning Colts.

Most colts are foaled during the month of May. All things considered, it is perhaps the best time. Earlier, the mare would not have the needed milk, later, she would have too much.

At four months old, colts are generally weaned, and this is among the most important periods in their lives.

Ordinarily, while nursing, if the food of both the mare and colt has been good, the latter is fat. The point is to take from the colt no inconsiderable part of its nourishment, and still have it retain its flesh, and what is better its health. To accomplish this, some preparatory steps must have been taken. Colts love company.

They get accustomed to that of their mother's, and if suddenly deprived of it will pine more or less. To obviate this difficulty, we have known breeders for four weeks before weaning to turn the colt into an enclosure with a spring calf, or even a cossett sheep, and not unfrequently a lone buck, whose isolation from the flock will dispose him to respond to the overtures of the colt at once.

This company will pacify him in the occasional absence of the mother, and prepare for final and complete separation.

When that time comes, it is always best to take the mother away from home, or entirely out of sight and hearing. If she is within reach of eyes or ears, the suggestion of loss will be oftener made than if only the appetite calls it up; and this latter can be in some sense satisfied by an extra allowance of what the colt has learned to love best.

The best place to keep the colt for the first three days is on an ample barn floor well covered with old hay, and so protected that there there will be no chance for the colt to get its feet into crevices, or otherwise receive injury.

He should be fed with the very best food that the season will admit of—grass with a little meal intermixed; a handful of oats for a change; water always handy, into which he can dip his nose fifty times a day; and what is of equal importance, he must have his new made companion, the calf, or the ram, to smell of, play with, and in his colt way talk to.

From four to seven days will be ample to partially wean him. He can then be turned into an enclosure with his company, which shall afford him larger space, both for exercise, and in which to obtain

food. The field where he is placed should be surrounded with a most substantial fence—at least one so high that the thought of scaling it will never enter the mind of the colt.

Besides, he should be visited by the owner or some one to whom he has become accustomed, a dozen time a day, and should always be given some little dainty at each visit, besides words full of soothing and caresses, which will be most keenly appreciated. In two weeks the crisis will have passed. He will remember the mother, but not pine for her, and thereafter with abundant food, well chosen company, and careful confinement, he will be ready to enter upon his first winter with every hope of passing through it without harm, and beginning his second summer in a healthy and hopeful condition.—*Hearth and Home.*

The Mare for a Farmer.

Every farmer who breeds horses for his own use or the market, should at the outset possess himself of a highly formed powerful built, well-bred mare, standing at least fifteen hands two inches high, and weighing no less than 1,200 pounds in ordinary condition. This mare he should breed to a thorough bred horse, of pure pedigree, good form, great strength and depth of body, standing on short powerful and sound limbs. He should at least be 16 hands high, and weigh not less than 1,200 pounds. From the union of these we may reasonably expect a fine animal. The mare must be at least resonably well-bred, and ought to be larger if anything than the horse. Never breed to a small or delicate thoroughbred. If you sow weeds you cannot expect to reap wheat. It may be asked why the same result could not be attained by by breeding your fine mare to one of the many breeds of draft horses. It might suffice to say, that experience shows it cannot; but this experience rests on reason. The thoroughbred and draft horse are of the same genus, but they are entirely of different origin. In form and physical constitution, they are widely different. The thoroughbred is the highest and most perfect type of the horse; while the draft horse isthe very lowest. In physical composition and form, they diffre as widely as the Caucasion does from the Ethiopian. If you breed a superior race with an inferior,the product will not be similar to either. It will degrade the superior, and elevate the grade of the inferior. Hence it is called a mongrel or grade. If you breed an inferior race with a lower grade than a superior, the product will be inferior to both, because the tendency of all animals is to revert to the origin

that most strongly predominates in it. Therefore if you breed your quarter or eight bred mare to a coarse Norman, Percheron, Clydesdale, Punch or Lincolnshire stallion, the product must be the inferior of both, because you are not elevating the standard, but degrading it.—*Farmer's Home Journal.*

Facts in Stock Raising.

"Many farmers say it does not pay to keep stock; and, in point of fact, they are very often in the right. I can hardly see how it pays to keep a wether sheep three and six months, getting, say $7 for three fleeces, and selling him for $3. But I think it must be quite as profitable as to keep a steer the same length of time and then selling him for $50. Such a steer will eat as much as eight or ten Merino sheep. But the truth is, we cannot expect to make anything by keeping stock of any kind, unless we keep it well; it must be gaining all the time. If we let a machine lie idle, all that we lose is the interest on the money which it costs. But an animal cannot be kept idle. It must eat every day; and if it gains nothing, we lose all the food, and the interest on the animal besides.

"But many farmers not only keep them for weeks and months together, without their gaining anything, but it not unfrequently happens that the animals actually decrease in weight. It has lived on its own flesh and fat, which is certainly very expensive food. Even in the case of well-fed pigs, which store up more flesh and fat for the food consumed than any other domestic animal; for every pound of flesh and fat we get in the animal, they eat about five pounds of food. They use four pounds to live on, and give us one of flesh. And when we have got this one pound, how excessively wasteful it is to waste it to the animal, and have it worked over again; and yet this is what thousands of farmers are doing to-day with cows, sheep and pigs.

"No wonder that 'keeping stock does not pay.' But good stock, fed liberally and with care and judgment, will pay better, all things considered, than any other branch of farming. Good meat brings a good price, and it is always in demand. It is the 'scallawags' that are hard to dispose of, and are always at loss—a loss to the producer and a loss to the consumer. Those who buy such meat get little besides bones and water. The poor animals have to live on their own fat and their nutritious juices.

"The first step in keeping good stock is to keep the land dry and

clean. The next is to feed liberally, and this will insure good manure, and that, in its turn, insures good crops.

"It is all very well to say that a 'peck of clover seed to the acre is the cheapest fertilizer,' and by its free use we can dispense with manure. I do not dispute the truth of the proposition. No one thinks more highly of clover than I do. But it only tells half the story. Clover makes good food and good manure too. An animal will take out the food, convert it into valuable products, and leave the manure behind. Our aim should be dry, clean land, more clover and rich grass, more and better stock, more and better manure.

"It cannot be too often repeated, however, that the value of manure depends on the food, and not on the animals. A raw-boned steer, if it has the same food, will make as rich manure as the best short-horn in the herd-book; and the droppings of a Merino sheep living on clover hay and oil-cake are just as valuable as those from Cotswold. But this is the point. We cannot feed clover hay and oil-cake to a Merino with half the profit that we can to a Cotswold. The former is adapted to live on comparatively poor food and grows slowly; the Cotswold has been bred with special reference to rapid growth on rich food. So when we advocate keeping well-bred stock, in order to make rich manure, we do so for the simple reason that we cannot afford to feed rich food to poor stock, and without rich food we cannot have rich manure."—*Journal of Agriculture.*

Rules for the Care of Sheep.

We copy, says the Buffalo *Live Stock Journal*, the following, suggestions about sheep from a circular issued by F. C. D. McKay, the General Agent of the American Emigrant Company. The Company have already over ten thousand sheep scattered among the farmers who purchased land from them, in flocks ranging in size from fifty to two hundred head:

1. Keep sheep dry under foot with litter. This is even more necessary than roofing them. Never let them stand or lie in mud or snow.

2. Take up lamb bucks early in the summer, and keep them up until December 1st, following, when they may be turned out.

3. Drop or take out the lowest bars as the sheep enter or leave a yard, thus saving broken limbs.

4. Count every day.

5. Begin graining with the greatest care, and use the smallest quantity at first.

6. If a ewe loses her lamb, milk her daily for a few days, and mix a little alum with her salt.

7. Let no hogs eat with the sheep, by any means, in the spring.

8. Give the lambs a little mill feed in time of weaning.

9. Never frighten sheep if possible to avoid it.

10. Sow rye for weak ones in cold weather if you can.

11. Separate all weak, or thin, or sick from those strong, in the fall, and give them special care.

12. If any sheep is hurt, catch it at once and wash the wound, and if it is fly time, apply spirits of turpentine daily, and always wash with something healing. If a limb is broken, bind it with splinters tightly, loosening as the limb swells.

13. Keep a number of good bells on the sheep.

14. Do not let the sheep spoil wool with chaff or burrs.

15. Cut tag-locks in early spring.

16. For scours, give pulverized alum in wheat bran; prevent by taking great care in changing dry for green feed.

17. If one is lame, examine the foot, clean out between the hoofs, bare the hoof if unsound, and apply tobacco, with blue vitriol boiled in a little water.

18. Shear at once any sheep commencing to shed its wool, unless the weather is too severe, and save carefully the pelt of any sheep that dies.

19. Have, at least, some good work by to refer to. This will be money in your pocket.

Wet Lime for Foot-Rot.

A friend of mine, with whom I resided for some years, rented an old grass park surrounding a gentleman's seat where there were a great number of fine old trees. The above field was notorious for foot-rot, beginning generally about the middle of July, and went on until the end of September. I have often seen fully half of the sheep (250) affected at the same time, and really it was a most pitiable sight. We managed to cure a few with "Cuff's Foot-Rot Powder," when taken in time. But upon the principle that prevention is better than cure, we set to work and tried various plans; and among others we tried hot lime, and it had the desired effect so far, but then the drawback was, it only served a few times. We then thought of wet lime; so putting a cart-load of small lime down at the entrance

of the folds, and making it thoroughly wet, stirring it into mortar, keeping it deep enough to cover the sheep's feet, we ran them gently through this at most twice a week. The effect was most satisfactory, as we never had another case of foot-rot in the park during the three years following, which was the extent of our lease. After adopting the above treatment, we began to put all the sheep through the wet lime from the beginning of July till the end of September, and a single cart-load served the season. Care must be taken to have it pretty wet, sufficiently so to saturate their feet thoroughly. So that if any of your readers should feel inclined to try the above experiment, it is not an expensive one at all events, and I am sure they would not be disappointed. I am well aware sheep will take foot-rot all the year round if folded on heated dung or foul fields, which should be avoided as much as possible. I will not venture to say how far lime will prevent it there, as I have never seen it tried for sheep kept in courts; but it can be easily done, as well as in the fields. If it prevents it in one case it ought to do it in the other.—*C. S. A., in North British Agriculturalist.*

"I have often seen it stated, that one thousand sheep will enrich an acre of land in a single night. This is a great mistake: they will scarcely do it in a fortnight. One thousand sheep folded upon an acre of reclaimed land will in one night restore to it more than a single crop will take off, but this is not enriching impoverished land."—*D. Wyatt Aiken.*

Cincinnati and the Hog.

Whenever we can say a good word for Cincinnati, we mean to say it. The time has come: It is with delight that we lift our voice to pronounce a eulogy upon the hog. We are aware that this effort will be unpopular, and may turn us to derision. Some vile joker will characterize it as egotism; but we fearlessly face the howl of the mob. In such a cause, we dare calumny to do its worst. We remember with pride that Ham settled Africa, that Bacon promulgated *De Armentis*, and that a spare-rib was the common foremother of us all.

The hog has been in disrepute for a long time, at least ever since he began to play his part in the ancient religions. It is fashionable to ridicule and denounce him, to call him a filthy brute, and to insist that he is the dire author of leprosy, consumption, cancer, scrofula,

and the most disgusting diseases that afflict humanity. This is the teaching of prejudice, not of science.

The hog outlives all hostility, and laughs, so to speak, at the success of his slanderers. Still is the reeking roast pig the sacrifice on many a dinner-table, and still is the rural ceiling festooned with the savory sausage and the smoke-house fragrant with ham. We deal with facts, not sentiment. The hog is a true cosmopolite—a citizen of the world. He increases and multiplies and inherits every part of the habitable globe. He is as ubiquitous as the bat. He does not stand in high repute for his manners, but he is most accommodating, thriving with equal content in the style of the rich and the kitchen of the indigent. He wallows sometimes, but naturalists tell us that he does this for the sake of that cleanliness which is next to godliness—for the same reason that the Pacific Islanders grease themselves. Among his quaint peculiarities are his grunt of satisfaction, and his squeal of remonstrances and reproach. He should never be fed till he stops his squealing; it is the approved method of breaking him of the habit.

Homer, in his Odyssey, honored the swine-keeper with the confidence of Ulysses—and why not? The hog, called stupid, is really one of the most enterprising and sagacious of animals. The gamekeeper of Sir Henry Mildmay actually broke a black sow to hunt game in the woods; and she ran in the hunt with wonderful success. She would track game, back and stand, and point partridges, pheasants, snipes and rabbits as skillfully as a bred pointer. She would bound in response to a whistle, and would wag her head and squeal with delight on being shown a gun.

The Babylonian Talmud says, "Cursed be he that breedeth hogs;" and the history of the Maccabees tell us that the scribe Eleazor walked straight to the tortures of persecution rather than eat a spare-rib, heroically preferring the martyr's stake to the pork steak. This animal has been under the ban of many religions. The Mohammedans learned from the Jews, as the Jews had previously learned from the Egyptians, to hate him because he perversely declined to "chew the cud;" but he still manages to masticate and digest considerable pottage in the course of a year.

The hog is the product of nature's most economical thought. There is no part that cannot be utilized. His flesh, fat, bristles, hair, hoofs and bones are all turned to account. "The divisions of his unctious body," says Apicius, "are as familiar as the divisions of the earth. His ears and feet go to souse; his brains are a choice

dish for the epicure. His tail has for ages been claimed by successive generations of children as their peculiar property. Tradition points out how to appropriate it; roast on the coals, take in the fingers and eat without salt."

The hog is the staff of life—the arch enemy of famine—the poor man's best friend. Moreover, in his earlier days he is strikingly playful, frisky, cunning and graceful—as much more interesting than a human infant of the same age as the latter is more interesting than so much putty. In adult pig-hood, he is omniverous and self-reliant, bold and expeditionary, and he breeds faster, grows faster and keeps cheaper than any other domestic animal.

America is pre-eminently the home of the hog—he is a logical deduction from Indian corn. He was introduced to Virginia in 1609, and here he multiplied so rapidly that the colonists were compelled to palisade Jamestown—high to keep out the Indians, close to keep out the hogs. Mrs. Hog can produce ten to twenty at a birth, as often as twice a year. The descendants of a single pair, allowing six young for a litter, would amount to six million in fifty years. The gratitude of the country is due to Cincinnati for that, by assiduous harvesting, she keeps down the inundation which constantly threatens to overwhelm us in an uncommon ruin.—*Chicago Post.*

Spring and Summer Care of Swine.

Swine, if properly managed, may be made the most profitable farm stock. They must always be kept growing, or else the food consumed is almost an absolute waste. To winter a pig at a cost of several bushels of corn, together with the expense of feeding, and have him no heavier in the spring than he was in the fall, is certainly a non-paying enterprise. Spring pigs, unless they can be made to attain a weight in excess of the cost of feed, would also be attended with a loss. The secret of successful money-making in feeding pigs consists in so managing them and the feed as to obtain a growth and weight over and above the cost of feeding and the amount of food required to sustain life and locomotion. For instance, a pint of corn each day might keep a pig alive all winter, and in spring the farmer would say, "I have wintered a pig," and his pig would be no larger than when he started him on his winter's fast. Whereas, if he had fed him all the corn he would eat, there would have been a proportionate gain and profit. There is an advantage in wintering pigs which must not be overlooked; they can be kept through the summer cheaper, as they

will eat grass or clover, and thrive on the same; while those born in the spring require milk and careful attention. The manure which would accumulate with a liberal bedding—and pigs should always have plenty—would constitute no small share of the benefits in wintering. Such hogs should be put out to grass as early as possible in the spring and fed liberally all summer. They will grow very fast, the grass sustaining life and keeping them in a healthy condition, the grain causing extra growth and swelling the profit. To economize and manipulate the feed as much as possible, the animals should be pushed to a condition fit to slaughter as soon as possible; because the gain is faster at this point than when in a lean condition, and, if fat, advantage can be taken any day of a rise in the market or a favorable opportunity to sell. Warm weather is better adapted to the increase of flesh than cold, hence the practice of many farmers to let their swine "root hog, or die," until October, waiting for the new corn crop to mature, and the cold weather, before beginning to feed them, is a disadvantage and waste. Their hogs get fat at a time when pork is the cheapest, for the reason that at this season of the year all surplus meats and poultry are being crowded on the market. Choose for the summer pasture of hogs a field where there are shade trees; and if there are none, erect temporary sheds for them to lie under, with a stream of water or a spring in which they can cool themselves and cool their bodies with mud to protect the surface from the bites of flies and insects. The ringing of pigs to prevent rooting is a question which has two sides. If they are very industrious and disposed to turn the sod all over they should be rung, or have the grinds cut so that they cannot root, but if they are tolerably quiet I would not persecute them, but let them enjoy a taste of the ground and the worms and grubs they would destroy. If there happens to be a patch of thistles in the field, induce them to spend their energies on that by scattering some small grain on the surface and digging a few seeds in. If hogs are fed all they want they will not, as a rule, root much, no more than is healthy for them and to supply the natural want for animal food which they do in this way. If they must needs be rung great care must be had that the rings fit easy in their noses and that the twist of the wire is not too long, or it will interfere with their eating and keep them poor. The careful farmer will look his animals over frequently to see that there are no troubles of this kind. The feeding troughs should be placed in a dry and clean place and should be kept clean; a muddy and stinking trough will cause a pig to lose its appetite, and should be tolerated no more than a filthy kitchen.—*Agricultural Department New York World.*

Hog Raising in Illinois.

W. H. Wilmot writes to the *Farmers' Club:* Living within sight of the smoke of my chimney are more than fifty farmers, each of whom will sell from $1,000 to $5,000 worth of pork next fall. As near as I can learn by talking with many of them, they all think that now is the accepted time for erecting steamers and getting mills. They keep their hogs on clover pastures, and all who have mills (and many are just getting them, even if it is not so proper a month as November) cook small portions of corn-meal for the hogs. In this section no milk is fed to the hogs, for the reason that there is hardly enough for the people. Farmers have found that hogs cannot live and thrive on grass alone, but by making swill with cooked meal they keep the hogs growing, thereby getting large-frame hogs before the corn hardens. These farmers generally plant quite large quantities of early sweet corn, which they cut up, when in good roasting ear, and feed, stalks and all. The success of these swine herds, for a few years past, has been due to the course I have given. Nearly all began poor, and now are rich.

Review of the July Number.

BY OLD IRON.

Agricultural Journals.—A good article, Mr. Editor, and just in the nick of time. We want more of the *readers* of our journal to become *writers* for it. Send along the results of your experiences, friends; no matter about plain and homely language. A highly finished composition in an agricultural journal is "love's labor lost." If you should make a little mistake here or there, our editor will fix it up all right. Tell us how to make corn, and raise pigs, and how far you have tried grasses, and your successes therewith. Tell us anything you know that is interesting and useful. Send along your little pieces; they will all be read. Don't fear.

Proceedings of the Goodwyn Agricultural Club.—"*Combination.*" Yes, combination is the word. Let us, the Brotherhood of the Plow, come together as one family, with one thought actuating us and one end in view, viz., self help and self preservation.

Those Granville chaps are a set of plucky fellows. We know that "tar heels" are good at "hang on;" and we sincerely hope the Goodwyn Club may become the foster-mother of a thousand others.

Successful Farming.—"M" is here again, telling us how to collect and apply manures; and he tells us in a good way. We have long

held that the farmer's only bank should be *at home* in his farm-pen or stock-yard. We hope "M" will not forget his promise to give us more upon this subject.

Transmutation of Plants.—We are free to admit that we never tried to produce rye from *oats*, and do not yet believe the thing *practicable*. And if it is, we can't see what practical benefit it can be to the farmer. The Society of Coburg may take as much credit to itself as it pleases for the "actual experiment" at "transmutation;" but the farmers of Virginia will take credit for actual experiments in the *production* of big oat crops from *oat seed*.

Willows and their Uses—Here is another branch of industry, almost entirely neglected in our State, but for which we have every desirable facility for making it a success. Thousands of acres of land might thus be turned to good account. Will not some Virginian who has had experience in this line, give us an article on the management of the willow, how it is prepared and sold, and what the basket-makers give for the article?

Stock Raising and their Diseases.—A long article, but full of good and practical suggestions to the farmer. We have read it with profit, and we feel sure that others will. The author's theory about the bots is new, and, after all, may be correct, but we leave him and the "horse doctors" to fight it out. The assertion that the horse is the "most useful of all animals" is a debatable question.

Mechanic Arts.—Let us, Virginians, patronize our own manufactures. Every stream and brooklet of the State ought to be alive with the clatter of machinery working up the raw material of our fields and forests. It is the way to get the money's worth for our products; and it is the separate road to prosperity and independence. Let us follow it.

The Household.—A few plain directions this month for making some extras for the table. We hope the daughters of Virginia will come forward and make this one of the most interesting and useful departments of the journal. Most people are fond of the nice, good things; and we, of much abused Virginia, *could* have so many, and of our *own make*, if we would.

Keeping Cows.—The writer of this article says, and justly, that soiling is better than pasturing; but adds "the subject has been too much discussed to require extended notice now." Right for some sections but not for ours. *Here* the stock are turned out, or always remain out, upon the commons, and nine-tenths of our farmers don't know what "soiling" means. The papers of this State

ought to keep the subjects of soiling, pasturage and fences, before the readers in almost every issue. The question of fence or no fence must come up for settlement sooner or later, and might as well be met fairly and squarely at once. There can be no sort of doubt but that soiling stock is the *best* and *cheapest* every way.

Poultry.—Again Mr. Lewellen presents us a page of good and useful items for the poultry yard. And the question of "F. R." we think well put, only we cannot subscribe to that part of it which says "the duck lays more eggs than the chicken" and "are delicious eating." In both respects the hen, in our humble opinion, is far ahead of the duck. Next to the hen we place the goose for "delicious eating" and profit.

Bees.—It seems to us that Mr. Polk is doing good service in the Department of Agriculture; and we only wish that every branch of industry that might be made to flourish in Virginia was as well represented. But too much handling of the bees is recommended. You will frighten off the inexperienced and those who fear the sting. He who in this department of industry will point out the way to attain the maximum of excellence at the minimum of handling will deserve, and will receive, the lasting gratitude of thousands who would engage here in it but are deterred for fear of the *pain*.

American Pomological Society.—We commend the notice of the next meeting of this Society in the present number of the *Planter* to the careful perusal of every reader. We hope it will turn out a grand success, especially for the South. Let us, from far and near, show in the best light the capabilities of our section.

SELECTED ARTICLES.—We have already noticed some of these. Others we would speak of here:

Washing Sheep.—We side with the writer that it is needless, burdensome, and cruel to wash the sheep at shearing time. But what is to become of Tomson's beautiful picture of sheep-shearing.

Removing Posts.—A good way not only to take up posts, but small stumps also; but the "prop" should be a V shaped frame, standing upon its two feet. A single prop would be sure to pull over to one side.

Water Cress.—Suggestive. And we have so many idle acres just the *beau ideal* for the water cress.

"Evergreens in the Orchard" and "Toads in the Garden" are both worth a careful notice. We can speak of the toad from personal observation. He is beneficial.

And now while we pen these lines the July number of the *Farmer and Planter* is being read with a pleasure and profit in thousands o

homes, for here are some things to please and much to benefit the careful reader. We said in thousands of homes—would that we could say in *tens* of thousands, for this journal is every way worthy the patronage of every farmer for hundreds of miles around. And we hope every reader will weigh carefully the words of our editor in the first article. It is the duty, the bounden *duty*, of every subscriber not only to *write* for the journal, but to get as many subscribers to it as possible. You would be benefitting yourselves and your State fully as much as the publishers. Have you not public spirit enough to help in this easy way to *build up our dear old Commonwealth?*

Messrs. Editors,—

Alas! what perils do environ
The man that meddles with c—old iron.—*Hudibras.*

In spite of the above warning I will venture a tilt with your iron-clad reviewer.

He says "but unless the plant food is very abundant, at the latter part of the season when it has become exhausted, and droughts occur, what will become of the corn?" But he has not deigned to explain in what way my preparation has diminished the quantity of plant food. If I find a quantity of wheat scattered on my barn floor and gather it into a pile is the quantity thereby made any less? Again, he says "running a deep furrow in the middle of the baulk, after the corn is laid by, would, undoubtedly have the effect of drawing the water away from the roots of the corn, especially as we may suppose that by Mr. Gregory's system the roots were all growing in a lump in the middle of the bed." Will "Old Iron" be so good as to give some reason for this supposition? *I* did not say the roots would be thus circumscribed; for I know they are not. I presume "Old Iron" as well as Dr. Hicks have seen how the best watermelon raisers prepare their land, putting all the manure in a hole two feet square, right under the seed; and yet the roots extend ten or twelve feet away from the hole. The willow, ash, maple, &c., delight in water; yet send a large portion of their roots into dry land. Presuming "Old Iron" is a Virginian, and will not object to the Virginia system of settling controverted points, I offer to him (if he will get any gentleman to test fairly, on land which has lain fallow two or three years—the time usually given for rest amongst us—my system against *any other preparation*, on upland or low grounds) to make good to him the deficit under my system, if he will pay me for my excess, the experiment to be tried on ten acres of land. I look upon

this, Messrs. Editors, as being one of the most important questions which has ever been mooted in your journal. If my views are correct, their adoption will be worth millions of dollars to the farmers. If they are unsound, and experiment shall so prove, no one will be better pleased to have the error exploded than I. The praise or the blame does not belong to me. I borrowed the plan more than twenty years ago from some of the most successful corn raisers in Granville. In conversation with a gentleman of the Goodwyn Club a few days ago he told me that this subject was first introduced into their discussions with a view to drive one of my sons, who has been bedding on the hard ground for some ten or twelve years, from this "primitive and untidy" fashion; but that the result had been to draw several members *into*, instead of him *out of* it. I will say to "Old Iron," and your other readers, that there is another great advantage growing out of what I am perfectly willing (after the preceding explanation) to have called my system, omitted from haste in the original article. This is, that you bury the seeds of weeds and grass so deep that they do not come up whilst the corn is growing if my caution against deep tillage be observed. This, however, cannot be done by Dr. Hicks' "stump-tailed bull." W. O. GREGORY.

Mechanic Arts.

Care of Agricultural Implements.

At the risk of incurring the displeasure of our friends, the manufacturers of agricultural machinery, by lessening the necessity for repairs on old and the demand for new implements, we wish to give our ideas of the proper manner of keeping these important items in the outfit of the farm. In the old days of general prosperity it did not matter much whether a reaper or a thresher lasted two years or ten, or when it was worn out or rotted out, the money was always accessible to buy new, and the farmer's neglect gave the manufacturer more work and a share in the surplus profits of the farm. Now, however, when surplus profits are what few farmers "can see," it becomes a matter of great importance to make every dollar invested in farm machinery pay the best possible dividend. To accomplish this every farmer should have a shed for his larger machines and a tool-house for smaller implements. The expense of these buildings is not large, as they may be of the rudest description provided they are water-

proof and have dry floors. Plows, hoes, rakes, forks, &c., when not in use should be cleaned and put in the tool-house, and always put in order when put away, as then you can order repairs for them and not be inconvenienced by the delay. Reapers and mowers should be put in perfect order when the season is over and backed into the shed ready for the coming season. Reapers should have props under the middle of the beam and platform so that no part will be warped by having the weight to support. It is unquestionably economy to have all needed repairs done as soon as the season is over, especially to reapers. Many farmers know, by experience, how annoying it is to send to a manufacturer the week before his harvest commences to have his reaper fixed and find that so many are ahead of him that he cannot get the work done for two weeks, or else that his mechanic has not got the necessary pieces, and has to order them by express at heavy expense to get them in time. If this was done after the season was over it would be done better and cheaper, and delays would not provoke loss of temper or involve actual loss by delaying harvest. The same remarks apply to threshing machines with equal force.

I remember hearing a farmer, then the owner of a fine farm in Culpeper, in speaking of his horse-power, say that he always took the best of care of his machiney, as when not in use he covered it up. And how was it done? I saw it afterwards, and its sills were on the ground just as it was used, and it was covered with brush. It is safe to say that with such treatment three years would be the extreme length of time that machine could be depended upon for service, while the same power would last fifteen years if properly taken care of. Is not this a matter worth the attention of every farmer. It is not unusual to find the threshing machine left out of doors just where the threshing was done one year until the next season arrives, by which time a very fair crop had grown over the machine itself, from the seed left in all its parts at the close of its last work.

It is equally common to see the landscape in winter adorned with reapers, left just where the last wheat was cut, to be alternately soaked by the rains and warped by the sun until the harvest again comes; by which time some mechanic is sure of a benefit, in the shape of an order for general repairs. As the object of this article is to cut off in some manner this source of revenue, mechanics will please excuse this interference with their vested rights, on the ground that the farmers are the most numerous class and they must yield some private profit for the public good.

Household Department.

Household.

BY MRS. A. M.

Pity it is that the pickling, preserving and conserving should come just as the fiery August days are upon us, but so it is, and if we have furnished ourselves with the little kerosene stove mentioned in a former paper, and can get rid of the indolence engendered by the hot weather, will find "that it is not so hard after all."

Although the warm suns bring us much personal discomfort, they also ripen for us every enjoyable fruit, first of which on the list is the peach,—good for eating, good for preserving, good for canning, good for freezing, good for peach butter, and better still, for peach *cloth*. Indeed, the good things that can be made from peaches are innumerable. Most persons find the old fashioned peach preserve cloying—too sweet, but a friend has just sent me her receipt, which she assures me keeps well, and certainly tastes well. She says, select sound fruit—clingstones are best; after paring, coring and halving, weigh six pounds of fruit, place them in the kettle, cover with water and add a small teaspoonful of soda; give them one boil, after which transfer to a dish until they are cold. Then weigh half pound of sugar to one of fruit and boil until they are clear. Peaches preserved in this way possess the decided advantages of economy and better flavor over the old method. But for family use I think *nicely* canned fruit preferable. Many persons make a great mistake in supposing that inferior fruit will do for canning. Always select the best clingstone peaches for this purpose; ¼ lb. sugar to 1 lb. fruit. Let them just come to a boil; have your glass cans thoroughly exhausted of air, by having placed them in kettles of cold water and allowing them to remain until the water has boiled. Fill full and cover quickly, and you will find no more palatable addition to your winter dinner table than these peaches will prove. For freezing, take the open or freestone peaches, the softer the better, mash well and sweeten well, after which freeze as you would ice cream. I am sure one trial of this delightful dessert will induce many others. Peach cloth is prepared by the following receipt: Take well ripened open stone peaches; mash thoroughly, add ½ lb. sugar to 1 lb. fruit, season with powdered cinnamon; have ready smooth, thin boards, well greased, upon which spread the fruit evenly, about an eighth of

an inch in thickness; after the first day turn daily until it is well dried; then roll tightly and enclose in a linen bag, hang in a cool, dry place, and it will be found excellent for tarts and puddings, and forms a particularly pleasant addition to the children's lunch basket.

DAIRY.

Butter and Cheese Making.

As movements are being made in the various parts of the State towards erecting butter and cheese factories, we trust farmers will take no steps ignorantly in the premises. If several farmers in a neighborhood are interested in the establishment of a cheese factory, it would undoubtedly be the better way for them to raise a small sum of money, say $100, and send for some person who has had experience in the business to come and survey the ground, and if he thinks favorably of the location, give his advice in relation to the formation of a company, the plan of buildings, the location of the same, etc.

It will be folly to think of establishing an associated cheese factory in a location where there is not a good, natural supply of living water for the stock whose milk is to be depended upon to supply the factory, unless great pains have been taken to afford water by artificial means. The neighborhood that can support a cheese factory must be a good milk-producing neighborhood; it must have a good pasturage and well prepared hay fields.

It would not be judicious to establish a cheese factory unless a sufficient number of farmers are interested to obligate themselves to furnish the milk of from 300 to 500 cows for a term of years. It would be desirable if this number of cows could be kept within a radius of two miles from the factory, as thereby much teaming would be saved and the milk would be delivered at the factory in better condition. Of course the distance from which milk can be brought with profit will depend largely on the state of the roads and the quantity that is to be drawn.

The location of the cheese factory should be a central one; if it could be built at the crossing of two roads which lead to the houses of the farmers that supply the milk, so much the better. What is of more importance than a central location is a supply of never failing spring water. A factory of 500 cows, with all the machinery and fixtures, will cost from $3,000 to $5,000.

A gentleman well informed on these topics writes that butter and cheese factories can be combined where spring water is abundant.

With about one-third added to the expense of building a common cheese factory, it may be fitted for both butter and cheese making. Then we are prepared to make the very most of our milk; we can skim partially or wholly, as the season of the year or the markets may influence. We have found in our experience that at certain seasons milk made into butter would bring patrons two or three cents more per gallon than when made into cheese, while at other times the profit would be in favor of the cheese.

Milk for the manufacture of both butter and cheese must be kept at an even temperature, and cold enough to preserve milk sweet while the cream is rising, in order that a good article of cheese may be made from the skimmed milk. Well water with ice might be used, but ice keeps it too cool for the better rising of the cream. Well water might be used, but only where the pump is kept constantly at work.—*Lewiston (Me.) Journal.*

Washing Butter.

Homer Hecox furnishes the New York Farmers' Club his plan of washing butter, which he claims to be new:

"I use a plain crank churn; goes by hand; average time twenty minutes for large, twelve for small churnings. I do not claim to make more or better butter from the same cream than with a dasher but I do claim that I can do the work with one-half the time and labor. Much of this saving is caused by the convenience of washing, getting rid of the butter-milk water and in working the butter. As soon as I discover that the butter begins to separate, I put in a quart of cold water; this is to thin the milk, which will cause it to free itself more readily from the butter. I then churn until the particles are about the size of a large pea. I then draw off the milk and put in a gallon of water, churn and draw again, and sometimes put in more washing. The common way is to churn until the butter is about one solid mass. But how is the water to take effect on the inside of one of these lumps of butter? I should as soon think of washing the inside of a glass bottle by washing the outside. I think that in order to make the most and best butter in hot weather, it is particularly necessary to cool the milk immediately after milking. Milk in tin pails; have a tub similar to a wash-tub, for each pail; set the pails in the tubs filled with cold water from a good spring well; stir the milk and water every few minutes until the milk is as cool as the water. If you can get

the milk quite cold before setting, and set shallow in pans, it is better not to let the pans stand in water while the cream is rising, as the cream will be all up before the milk becomes very thick. Skim as little milk as possible with the cream, as that is the great secret about quick churning."

Value of Salt for Cows.—A correspondent of the Buffalo *Live Stock Journal* says: In experiments made in June for testing the effects upon the milk from withholding salt from the cows, it was found that going without salt three days reduced the milk five per cent. *in quality;* and five days, seven per cent. Similar experiments later in the season produced less effect as the season advanced. Withholding salt for the last two weeks in November, when the cows were regularly fed on hay to supply the place of the failing grass, no appreciable effect was noticed in the milk either for butter or cheese, nor did the cows show a much sharpened appetite for salt after so long an abstinence. Since cows, as well as other stock, do not always require the same amount of salt, the best and safest way is to place it where it will keep dry and clean and let them partake of it *ad libitum.*

It is estimated by Prof. Chandler that the New Yorkers get one quart of water in every three quarts of milk. As the annual consumption of milk in the city and vicinity is 120,000,000 quarts, it follows that, at 10 cents per quart, the snug little sum of $4,000,000 is paid by consumers for water which is used to "extend" the lacteal fluid.—*Ex.*

POULTRY.

Asiatic Fowls.

Some 25 years ago, when the Asiatic breeds of fowls made their appearance among us, we were upon the verge of *hen feverism*, and the buff Shanghai gave it the impetus. When first introduced they were a large, yet compact, short-legged bird, and were received by farmers as a very desirable fowl for market purposes; but soon the fanciers, "taking for their stand-point, size alone," commenced breeding for that desideratum, producing a long-legged, coarse, ungainly fowl, that could easily look down upon the top of a flour barrel, or take their corn from a four foot post; the bones of such fowls were

found to weigh more than their flesh, until attaining the age of 12 months, the pullets not laying until 6 and 7 months old. Therefore the boarder at the hotel would not eat them; the hotel proprietor refused to purchase them; the butcher could find no sale for them; the farmer would not raise them, and the country at large cried them down, until the old Shanghai fowl was in oblivion.

Now, at the present time, we notice the same spirit manifest in the breeding of Light Brahmas. Agricultural fairs and poultry shows are favoring size, much to the detriment of other points more requisite to a profitable fowl; and our fanciers are endeavoring to increase the size by selecting, as breeders, large, coarse, long-legged birds. If this course is continued, we shall soon have in form and worthlessness a second tribe of Shanghai fowls.

For profit in market fowls and as egg producers, give me the compact, short-legged Brahma, that will mature to laying at 4 and 5 months old, and the young fowls, when dressed, are not all legs and bones. I have bred the Light Brahmas in purity for the past 20 years, from 200 to 400 annually. My young cocks hatched in March, when 10 weeks old, sell readily, at that early season, in Boston market at $1 each; and my pullets, when high fed, lay at 4 and 5 months old. Of all breeds yet introduced the Light Brahmas stand No. 1. *John S. Ives in Prairie Farmer.*

Profit of Poultry.

A lady writes to the Farmers' Club: (*N. Y. Tribune.*) Previous to January 1, 1869, our experience with hens had been but indifferent. At that time we procured 10 hens and a cock of the Brahma breed. Many who should have known better shook their heads doubtfully, remarking that hens were not "much profit;" that if you had it to buy, a great expense must be incurred for grain, the return for which was doubtful. These remarks were at least unpleasant, and we resolved to dispel fears by means of a debit and credit account, strictly kept, for one year at least, as a test. Accordingly account was kept of every item of outlay on their account, at the disadvantage of feed being bought in small quantities. Hens were set from March till June only, or the return would have been better, as the chief profit was derived from chickens rather than eggs. Credit was given for every egg and chicken, at current market prices. On December 31, 1869, the aggregate receipt was $176 37, and on the same date the aggregate outlay was $80 19, which left a credit balance of $96 18.

This was done under many disadvantages, and falls far short of what is possible. All the grain fed to these fowls was cooked. They were furnished with a variety of food and an abundant supply of good water. They were always an object of regular attention and care, and were never in any manner when avoidable worried or frightened.

Care of Moulting Fowls.

At this season the fowls are passing through that semi-disease, moulting. With young birds the process is very easy, and the time occupied is not very great; but with fowls that have passed beyond the second season, the labor of renewing the plumage is protracted and exhausting. Much assistance may be rendered by the poulterer in varying the diet of the birds, and in giving tonics, &c. Pieces of meat and fish should be thrown to them often, and lime and pepper mixed in their food. An abundance of grass or other vegetables should also be given them, and a half teaspoonful of sulphate of iron in solution to every gallon of fresh water in their drinking vessels. These attentions will be amply repaid by an increased vigor and healthy appearance in the fowls and an earlier recurrence of their laying propensities.—*Massachusetts Plowman.*

BEES.

Care of Bees in August.

It is well, in this month, to examine all hives that have swarmed, and those containing second swarms, to be sure that the young queens, which both must contain, if they have any, have become fertile and are all right. Many young queens are lost when flying for fertilization, and as they fly at a time when there is no young brood in the hive, the colony is ruined if they are lost.

The presence of brood in movable hives is proof that the queen is there and fertile; but it is often necessary to change full combs for empty ones, in order to give her room to deposit her eggs. Often, in an abundant yield of honey, we have seen hives so packed in the stores that not an empty cell was ready for the use of the queen when she became fertile.

If there is no brood, you must give them at once a royal cell, or a frame of eggs, and uncapped larvæ from some more fortunate hive. If it is not strong, however, it is best to unite it with some other that is not large. Bees will unite at once and peaceably, if either colony is without a queen.

This month is a good one in which to Italianize bees. Many think that better colored and more vigorous queens can be reared now than

at any time. We have sometimes thought that this was true, but of one thing are sure, that queens reared in colonies where honey is plenty, are, as a rule, better than those raised in nucleus hives. In this month, the loss of a queen for a few days is not of so much consequence to a colony as in the earlier months. The old one can be removed and replaced by a young Italian without serious disturbance. There is some trouble, but no one need undertake to make bee-keeping pay unless he is willing to be at some expense and trouble when beginning.

If you have moth millers about, be careful now. Keep the refuse comb swept clean from the bottom boards, and allow no pieces of empty waste comb to lie long about among the hives. We have seen such pieces prove a nursery for worms. The miller deposits her eggs in such places, and if unmolested, they soon hatch in numbers sufficient to infest a whole apiary. If you are careful to kill all the worms and every miller, you will find, for one season, that you may be entirely rid of this pest of careless bee keepers.

Look well, in this month, to all hives that contain second swarms, and to those that have cast a swarm. These contain young queens, which may have been lost before laying. With movable-comb hives it is easy to examine and see if the eggs or brood are in the combs.

If you have bees in box hives or gums, you may decide if they have a fertile queen in an easy way. If the drones are driven to the bottom board any night, or driven from the hive, they have a laying queen—queenless colonies never drive out the drones. The contrary, however, is no sign that they are queenless; for good prosperous hives often retain their drones much longer.—*Mrs. E. S. Tupper in Iowa Homestead.*

Finding the Queen.

If bees are in movable comb hives, the best way, in our opinion, is to carefully open the hive and remove the frames, one at a time, beginning with those at or near the centre, and examine them as they are removed. She may be readily found by having an assistant look for her on one side of the comb, while you are examining the other. If a box hive, make an opening three or four inches in diameter in the top of the hive, and place a box, with at least two glass sides, over it. The box should have an opening in the bottom to correspond with the one in hive. Close all other openings in the hive, that the bees may not escape, and with a couple of light sticks commence rapping on the sides of the hive. Watch the box closely, and generally among the first bees that enter it you will see the queen.—*Rural New Yorker.*

Horticultural Department.

Theories.

The latest novelty in Horticulture is the discovery, by General Pleasanton, of Philadelphia, that plants and animals grown under blue glass succeed better than under any other color. He tells us that he has tried it extensively on grapes and has even succeeded in revivifying an exceedingly delicate calf by the use of a blue glass protection. An old gardener of our acquaintance once said that science was one thing, but common sense was another, and that unfortunately the latter frequently failed to agree with the former. When we see such theories advanced with hardly a shadow of evidence we are inclined to agree with our friend. We are not old fogies, on the contrary we earnestly desire progress and investigation, but surely it is hardly reasonable to expect us to "take to" blue glass simply because a sickly calf recovered under it, or because grape vines carefully cultivated succeeded well beneath its shade. The philosophy of a theory must be plainly demonstrated, or the fact resulting from the theory must be fully and unequivocally proven, by actual experiment and observations, before the theory itself can be adopted as true. We submit that, so far, General Pleasanton has done neither.

The American Pomological Society.

The prospects for an unusually large and interesting meeting of this society are daily increasing. The fact that this will be the first session of the society ever held in the Southern States, together with the large list of premiums offered for the first time by this association, combine to deepen the interest manifested in it. We are glad to learn from Mr. Elliott, the Secretary, that the premium list is being largely increased, and we regret that we have not received the amended list in time for this issue. An interesting feature will be the offering of

horticultural and agricultural journals as premiums. Many of our leading magazines will thus be placed within reach of competitors.

We are only able at this date to insert the list offered by the publishers of this journal, viz:

For best kind of apple, SOUTHERN PLANTER AND FARMER, one year.
" " peach, " " " " "
" " pear, " " " " "
" plate of figs, " " " " "
" " oranges, " " " " "
" " grapes, " " " " "

We append some extracts from Northern journals showing the interest manifested in that section:

AMERICAN POMOLOGICAL SOCIETY—MEETING AT RICHMOND.—In another column we have given the circular of President Wilder in reference to the meeting, to which no doubt our fruit growers and horticulturists will respond with their usual enthusiasm.

We hear from private sources that the citizens of Richmond are doing everything in their power to make it worth the attendance. We feel assured that those who may be unable to attend this session, will be deprived of one of the most enjoyable horticultural pleasures of the season.—*Gardners' Monthly.*

AMERICAN POMOLOGICAL SOCIETY.—The coming session of this society, to be held at Richmond, Va., on the 6th, 7th, and 8th of September, will undoubtedly be one of the most important sessions the society has ever held. This being the first meeting held so far South, and being in a region so well adapted to the growth of fruit, and among so many fruit growers, we may anticipate much of novelty, as well as of value otherwise. As we understand from the President, it is intended to make a special effort to complete the catalogue by adding the division relating to the Southern States. The collections of fruit will no doubt be of interest, as comprising varieties drawn from a wider extent of country than heretofore, including the south as well as the north and west.—*Tilton's Journal of Horticulture.*

Reply to Inquiries

IN RESPONSE TO A. C. W., SUBLETT'S POSTOFFICE.

1st. Grafting upon wild stocks does not affect the quality of the fruit. That will be the same as that of the parent tree.

2d. If your land is properly prepared, viz. thoroughly drained, it will make no difference where your vines come from. The change of soil will not affect them. Young vines from the nursery are preferable to old roots grafted.

3d. That depends upon circumstances. Delicate growers, such as Delaware, may be planted five or six feet apart, while Concord and Norton require eight or ten feet. For apple trees twenty to twenty-four feet we think the best distance. For standard pear eighteen or twenty feet. For dwarf pear ten or twelve feet.

4th. Some varieties such as Bartlett and Belle Lucrative will bear in six years from the graft, others require eight or ten years. Grafting or budding either answers very well.

5th. You can root-graft during the winter. Stock grafting should be done before the buds swell in the spring. We generally bud peaches in August though September will do as well. If inexperienced you had better procure a small number of trees from a nursery to start with, and then while they are growing you can add to them by budding and grafting stocks of your own raising.

Transplanting Trees.

A tree will transplant very much better and grow with more certainty if dug when the ground is very wet, and if it is a valuable tree it pays well to wet the ground the day before digging.

Almost any evergreen will bear transplanting and will do well if shaded the first summer. No one would believe the difference till they try it.

There is no trouble about transplanting large trees, if you take two or three years for it. We have tried it on pear, which is the hardest to move. Dig three-fourths up and then fill up the place till another year; or, if a very big tree, takes till another year. This saves labor, for then not so much digging is necessary.

Plants started too early in the spring get a check or kind of chill from which they will not recover the whole season.

Trees should hardly be watered at all unless they are mulched, not simply because of the waste of water in evaporation, but the cold produced by the evaporation does about as much harm as the water does good. We often hear persons say they wonder why watering trees seems to do so little good. The reason is that the evaporation produces so much cold that the tree is stopped growing. And then it takes very much more water to reach the roots of a tree than the inexperienced are aware of—so that the single bucket of water does nothing more than make a cold place round the collar of the tree. If the tree was in a strong growing state it could bear it, but it is in as much need of warmth as water.

Mulch prevents evaporation and holds the water till it has time to

reach the roots. But when we consider that a barrel of dry earth will nearly hold a barrel of water, we must not think that a single bucket of water will be of much use.—*Mr. Creighton, in Gar. Mon.*

How to Pack Grapes for Market.

When the grapes are fully ripe the bunches should be cut from the vines with a pair of hand-shears, always taking hold of the stem when moving the bunch. This precaution is necessary, so that the "bloom" may not be rubbed off by handling the berries. The grapes are then carried from the vineyard to a cellar or packing house. All green berries should be removed from the bunches before packing. This can be rapidly done by holding up each bunch by the stem and cutting out the unripe berries with a pair of long, pointed scissors. Grapes bring higher prices in the New York market when packed in small boxes, holding not more than five pounds each. These boxes are now manufactured extensively in grape-growing districts, and a very low prices, by the quantity. They are made of either very thin slips of wood or stiff pasteboard. When ready to pack, the bunches should be carefully placed in the boxes, one bunch at a time. The box should be shaken a few times while being packed, so that the fruit will settle firmly and not be displaced by the jarring of railroads or rough handling on the way to market. When the cover is removed from a box of grapes that has been well packed the stems of the bunches are not visible and the berries of the top layer should be level with the side pieces of the box. Eight, ten or a dozen of these small boxes may then be encased in a strong but roughly constructed crate, similar to those used by Southern "truckers" in forwarding vegetables and peaches to Northern markets. The consignee should be notified by mail of each shipment, stating clearly, but briefly, the quantity and quality of the fruit shipped.

The bunches of grapes should be assorted at the time of gathering. Small or straggling bunches should not be packed in the same box with well-formed shouldered bunches. Each kind will bring more when packed separately. The class of buyers who are willing to pay high prices for large and well-formed bunches will not buy poor bunches at any price.

Carelessly gathered and badly packed grapes, sent from a distance to New York or other Northern markets, arrive in a damaged condition and are sold at a low price, if at all; and this has heretofore been the case with much of this fruit shipped from the South. There must be a reform in this matter, or grape growing for market will not pay.—*Exchange.*

The Bearing Year in Apples.

1st. Take scions from a tree in 1871, and put them into a good and thrifty tree, and do the same in 1872, and you will get fruit in alternate years.

2d. If you cut off of thrifty trees the growth of 1871, in the last of July, leaving three or four buds that would come out in 1872, you will force out the next year's buds, and gain one year, and that will give the odd year.

3d. If you remove all the blossoms on one half of your tree in the bearing year, you will have fruit on that half the odd year. These things I have done successfully.

I have now in bearing the Victory apple of the odd year produced in this way; next year the scions of the last year will bear on the regular year. The remarks of your correspondent in the June number are good and practical.—*S. A. S. in Tilton's Journal of Horticulture.*

Mr. Mechan's Orchard Culture.

(From Gardner's Monthly.)

Nearly twenty-five years ago we found that the *root fibres* of trees were only *annual*—like the leaves they died every year. In 1853 we published it as a fact; we have fought it through until we believe it is now accepted as *scientific truth.* They have the same relation to the main roots as the leaves have to the branches, except that while the leaves are the preparers of the food—the cooks—the fibres are the providers—the husbandman of the cooks. Just as the branches are of use only as supporters of the leaves, which, like the ancient rib of Adam, are formed by morphological laws out of tree bodies; so the main roots are only of benefit in so far as they afford the material out of which fibres are formed, to hold the tree in position, and possibly, in a very small degree, to draw in moisture.

Remembering this, now take up very carefully a young tree, and we find that the fibres are nearly *all on the surface*, and that they decrease in number and importance with every inch of depth. In the largest trees scarcely a fibre will be found one foot from the top; large roots—tap roots—you may and will find, but no root that is of the slightest benefit to the *nutrition of the tree.* How then a tree can be benefitted by the destruction of this large army of agricultural laborers, toiling at the surface to maintain the growing nation thriving in its many industrial occupations above them we do not understand.

Keeping Qualities of Grapes.

The *Fruit and Wine Reporter* says, there is a great difference in varieties for winter keeping. The very early sorts are, in general, poor keepers, Hartford and Adirondacs are examples of the earliest and are both transient. The Delaware may be kept for a while with considerable ease, but it soon loses character. The Concord is, perhaps, the shortest lived of all. Its thin and tender skin will hardly suffice to carry it to market in presentable condition, and frequently cracks on the vines. A tough skin and bunches not too compact, are excellent qualifications. The Isabella is supposed to be a good keeper, but it too often loses its flavor after a few weeks, particularly if allowed to become dead ripe, as it did last fall. Wherever the Catawba perfects itself, it is a safe variety for winter keeping. The Iona is one of the best also. It retains its *spiritus vinus* flavor for a long time. The Israella is said to keep well by those who have tested it.

Some of Rogers' Hybrids promise to be exceedingly valuable in this respect. No. 1 keeps well and seems to improve in quality. Some of the black varieties such as 4, 19 and 43, have succeeded well with me. Among the reds, No. 15 and Salem seem to equal or surpass all others. Salem is much the best quality; and to the majority who eat it, not surpassed by any other variety. Fruit of this, gathered in September, is still in perfect condition, and promises to continue throughout the winter.

A Foreign Opinion of American Wines.

The *Volksfreund* says: "A member of our editorial corps who was formerly engaged in horticulture and grape culture, and who felt annoyed at the severe criticisms made by those would-be connoisseurs upon our Ohio wines, appealed a few months ago, to an impartial and competent forum. He sent samples in sufficient quantity of wines raised in this neighborhood, to a place in Eastern Germany where usually choicer Rhine, Moselle and Frankish wines are drank than even on the Rhine itself, and where, besides, Hungarian competes with German wine, and where the judgment is not biased by local preferences as is the case often on the Rhine.

"The specimens shipped had been selected by Mr. B. Roth, of the St. Nicholas. They were served up at a *fete* in Silesia, which was attended almost exclusively by men of eminent culture and standing, enjoying the best opportunities to know and pronounce

upon the gifts of Bacchus. Excellent and indisputably genuine samples of German and French wines were at hand for the purpose of comparison.

"The following is the conclusion reached: We have nothing to say of your white wines. It may be that they were bottled too early, or damaged by the heat in transportation, and may, therefore, have a better taste there (in America) than here; but to us, notwithstanding their strength, they seem vapid, and sour besides.

"The Ives Seedling has a peculiar, too spicy taste, and is, therefore not adapted for ordinary beverage. Yet it is a good wine, and perhaps to be recommended for medicinal purposes. It resembles certain kinds grown on the Grecian islands.

"The Virginia Seedling is an excellent quality, and already ranks even with petit Burgundian, and under a perfect treatment it may yet rival the best Burgundian.

"Your sparkling wine (Werk's Double Eagle) has astonished us. Some gave it a decided preference over the French on account of its natural bouquet, and because it has so much body."

American Grapes.

A correspondent of the *Boston Spectator*, after a late trip through the wine-growing countries of Europe, is convinced that American grape growers follow too servilely the process of European culture. It is well known that the European grapes can be grown upon this continent only on the Pacific slope, where the climatic conditions resemble those of the western coast of the Eastern continent. Our native grapes being adapted to an entirely different class of conditions, would naturally be expected to require a different treatment. Our excessive pruning for example, is thought by many to seriously cripple the productive power of American grapes. To test this matter for himself, the writer in the *Spectator* commenced to vary the treatment of his own grapes from the imported methods. He now raises his trellises to the height of twelve feet, and trains his vines so as to produce the heaviest fruitage at the top of the trellises. He finds that their elevation above the ground, and subsequent greater exposure to the sun's rays, secures them from rot and mildew. While those diseases, with leaf-blight and tendency of the fruit to bursting, affect to a considerable extent the vineyards of his neighbors, he is entirely without annoyance on that score.—*Exchange.*

Manure for Market Gardening.

No matter how favorable the location, nor what the character of the soil may be, he tills to great disadvantage who fails to make a liberal application of manures. The question for the gardener is, how much manure can I use with increased profit? And if he is alive to his own interest, he will soon discover that the quantity that can be be so applied to an acre is large. Of the bulky manures, that from stables where the horses are fed on grain and hay, is of most value. This quality of manure, almost free from straw, we buy at Newark, N. J., at an average of one dollar and thirty-eight cents for a two-horse load. This is hauled and thrown in heaps, sometimes composted with tanners' refuse and woods earth, turning it over two or three times before applying it. Market gardeners will use from fifty to seventy loads of this manure to an acre, besides a top dressing of five or six hundred pounds of a speaial fertilizer. For the past four years we have contracted for all the refuse from a large soap factory, and have found this waste lime, potash, and fatty matter a valuable top dressing, applying it at the rate of three or four tons to the acre. We have also used a compost made by decomposing muck with the salt and lime mixture, then adding to this compound an equal bulk of yard manure. At the end of six months the whole mass is homogeneous, and when turned under for garden crops, fully equal, load for load, to pure horse manure."—*Quinn's Money in the Garden.*

Insect Traps.

Now that horticulture has come to be largely a fight with insect depredators, every method of getting the best of the foe is eagerly scanned. Some horticulturists are beginning to find out that the easiest way to fight worms and insects is to trap the parent millers, moths, or bugs, as is easily done by suspending in the garden wide-mouthed bottles or jars, half filled with thin molasses or very sweet water. A writer in the *New York Observer* says: I have tested the efficacy of this insect trap, and have found it all that can be desired for trapping the butterflies, moths, millers, and beetles of every species of insect that infest fruit trees and vines, vegetables and flowers. The worms on grape vines, worms on tobacco, on tomatoes, and on Irish potatoes, all spring from eggs deposited by butterflies which can readily be entrapped in this way. We trapped last season scores of many species of depredators, in our city lot in Brooklyn.

Several gentlemen who reside in the valley of the Hudson river have trapped more than a bushel each, consisting of almost an endless variety of moth millers, beetles, bugs, and flies. Every fruit tree, every evergreen and deciduous tree, every berry bush and fruit bearing vine, and every vegetable cultivated in the garden is attacked by a species of noxious insects which flourish only where their appropriate species of trees or fruit is cultivated; and strange to say, every one of these foes spring from parent insects in the form of butterflies, moth millers, beetles, or bugs, every species of which will hazard life for the sake of getting a taste of the contents of the bottle. Foreign papers state that it was estimated that more than millions of insects were trapped in bottles containing very sweet water, in a certain section of France last year. As every butterfly or moth produces a very numerous progeny, it will be seen at once that it is in this form the insect ravagers can be most successfully fought.—*Ex.*

Alkalies.—Why do you put lime with your manure when composting or preparing it for application to your fruit trees, vines, and vegetable garden? Because it is the recommendation of writers is not a sufficient answer. We reply that lime has been found to be the best alkali, or an alkali in the best condition to supply the demands of vegetation; the most readily appropriated by all kinds of fruit bearing trees, vines, and plants. And the need of an alkali of some kind for making vegetables, trees, etc., give an abundance, and perfect products, arises from the fact revealed by chemical analysis, that lime and potash exist in them. Your soil must contain all the substances that enter into the growth of vine, tree, and plant, and the fruit or products of them as well.

The fruit of all these imperatively demand an alkali. Pomologists advise dressing the soil of the orchard with lime, when trees become barren of fruit; farmers advise a top dressing of land sowed to wheat when a sufficient straw can be grown, yet the heads do not fill well for the reason that lime is needed to perfect the grain. Old soil exhausted of its lime and potash, or new land when your vines are at fault in setting and perfecting grapes, will be improved by a liberal addition of lime and ashes.—*Fruit and Wine Reporter.*

Keeping Sweet Potatoes.—I notice K., in your journal of February 23d, wishes to know how to keep sweet potatoes. We have them perfectly sound and good all the year round, and though our way may not succeed in a colder climate, I will give it.

Dig just before heavy frosts, and having plenty of perfectly dry dirt, and making a layer of it on the top of the ground, in a pen, house, or out of doors, lay the potatoes on it, (to be very certain of not rotting, let no two touch,) and another layer of dirt, and then one of potatoes, &c. An obtuse cone shape is best. Layers of dirt to be one or two inches thick. After disposing of all your potatoes in this way, cover them with the same dry dirt, then with dry straw, fodder, or something of the kind, and protect it from the rains by boards, etc. In getting them out for use, use care, and take out enough for several days at once, and I think you will succeed. I suppose the straw covering will need to be thicker in your country. Of course, you can regulate that to suit. The principal point is in having the dirt dry, and keeping it so. A trench around the pile with an outlet is first rate.—*Country Gent.*

Miscellany.

Sulphuric Acid for Destroying Weeds in Lawns.—A writer in an English journal suggests the use of ordinary sulphuric acid or oil of vitrol as an excellent agent for the destruction of weeds on lawns. The difficulty of eradicating such unsightly elements of the lawn is well understood, since to do so satisfactorily requires the removal of a large amount of dirt, producing a corresponding injury to the general appearance. By taking the acid in question, and allowing a few drops to fall into the crown of any obnoxious weeds, it will turn them brown in an instant, and ultimately cause the death of the plant. Great care must of course be taken to prevent any of the acid from falling upon the skin, or any article of clothing; but with ordinary care a large amount of surface can be treated in a short time with most excellent results.—*Report of Dept. of Ag.*

A Way to Grow Strawberries Successfully.—John Ford, a very successful strawberry grower of Detroit, Michigan, raises abundant crops for the Detroit market. He plants in drills or rows, three feet asunder; plants one foot asunder in the rows. He does not expect a crop the first season, but allows the young plants to take root and grow together in the rows, forming a mass of plants about a foot wide. The intervals between the rows are kept clean with the cultivator. He gets a splendid crop the second year, and when it is gathered the plants are turned down with the plow, and the ground prepared for some other kind of crop. He does not keep the strawberries in the same ground for more than two seasons.—*Western Rural.*

Average Quantity of Strawberries per Acre.—The average production of strawberries per acre in Delaware, Maryland, and New Jersey, is but 1,500 quarts per acre. This is true of large plantations for market purposes; but where only a small piece of ground, one to two acres is planted, the yield is often doubled, because the land is better cared for, better tilled, and more amply manured. It is a good rule, worth laying down, in strawberry culture, that if all the manure and one-half the labor were concentrated upon half the space, the product would be doubled, and the expense of culture would be much less. It should be the desire of growers not to get more land, but to put more manure upon the land they already cultivate.—*Horticulturist.*

Old Rose Bushes.—A subscriber sends the following on the management of old rose bushes to the New York *Observer:* "Never give up a choice but decaying rose bush till you have tried watering it two or three times a week with soot tea. Take soot from a chimney or stove in which wood is burned, and make a tea of it. When cold, water the rose with it. When all is used, pour boiling water a second time on the soot. The shrub will quickly send out thrifty shoots, the leaves will become large and thick, and the blossoms will be larger and more richly tinted than before. To keep plants clear of insects, syringe them with Quassia tea. Quassia can be obtained at an apothecary's. The directions I enclose have been fully tested in my family, with most satisfactory results.—*Prairie Farmer.*

How to Grow the Verbena.—Dexter Snow, who for several years has made the propagation of the verbena a specialty, says of its cultivation: "To grow the verbena successfully, plant them in beds or borders cut in the turf, chop the turf well, and thoroughly mix with it a good share of well decomposed stable manure; never, on any account, plant them in an old and worn out garden soil, as they will most assuredly fail. Give them a change of soil each season, as they do not thrive well two years in the same bed. Let the beds, if possible, be where they will have the sun the entire day. By following the above directions, one may have a verbena bed that will be a mass of bloom the entire season, amply repaying the care and toil they may require.—*Exchange.*

Sowing Norway Spruce Seed.—An Omaha correspondent asks us to give, in the *Monthly*, instructions for raising Norway Spruce seed. It is so easy to raise these, and all other evergreens, no elaborate instructions are needed. They simply need shade. Corn stalks

or brushwood laid on tolerably thick, as soon as the seeds are sown, and kept on during the first summer and winter, is really all the secret there is about the matter.—*Gar. Monthly.*

Mr. Wm. H. Beach, of Buena Vista Town, has discovered, and by practical use, demonstrated, a dead shot for the gentle potato bug. It is very simple, yet effective, and is nothing more nor less than an application to bug and plant of castor oil; and if it don't kill the plant, planters may rest assured that the bug can have no terror for them now. We know whereof we write.—*Ex.*

To get rid of the apple borer it is recommended by Chas. Downing "that the earth be drawn away, to the depth of two inches, from about the tree; and having dug out or otherwise killed those already in the tree, to bind about the tree strong, heavy paper—hardware paper made of tarred rope is the best—a foot high, held there by good twine, then replace the earth."

Weeping Willows Hating Water.—A. N., informs us that a willow, though it may be thirty feet high over water, will send its branches down to within a few feet of the water, but never *into it.* The branches always stop short of the water.—*Gar. Monthly.*

[Let A. N. come to Virginia, and we will show him weeping willows dragging their branches on and in the water.—Eds.]

Book Notices, &c.

Rules, Regulations, and Premium List of the Thirteenth Fair of the New Jersey Agricultural Society, to begin Tuesday, September 19th, 1871, and to continue four days.

Premium List of the Alabama Agricultural and Mechanical Association. Fair will commence Tuesday, October 10th, 1871, and continue five days.

Premium List of the Kansas State Agricultural Society. Fair from Sept. 11th to 15th, 1871.

Premiums and Regulations of the Third Annual Fair of the Maryland State Agricultural and Mechanical Association. Tuesday, October 31—four days.

Catalogue and Prospectus of Roanoke College, Salem, Va., Rev. D. F. Bittle, D. D., President.

Descriptive Pamphlet of the Aultman & Taylor Manufacturing Company, Mansfield, Ohio.

Advertisers' Gazette, Geo. P. Powell & Co., 41 Park Row, New York. Our business transactions with this Advertising Agency have been always satisfactory.

Annual Report of Board of Trade and Merchants Exchange, Louisville, Ky.

Catalogue of School Material, J. W. Schermerhorn & Co., Manufacturers, 14 Bond street, N. Y.

The National Sunday School Teacher--Adams, Blackmer & Lyons Publishing Company, Chicago, Ill.; $1 50 a year.

American Sunday School Worker, J. W. McIntyre, Publisher, St. Louis, Mo.; $1 50 a year.

Burke's Magazine for Boys and Girls; J. W. Burke & Co., Macon, Ga.; $2 a year.

The Galaxy for August to hand in good time as always; Sheldon & Co., 677 Broadway, New York; $4 a year.

Report of the Cincinnati Industrial Exposition of 1870. Quite a large volume. The Exposition will commence this year Sept. 6th, and last one month.

This is the first opportunity we have had to offer our congratulations and welcome to the new proprietors of the *Farmers' Gazette*. It has much improved in appearance—has started upon its new course with vigor, and cannot fail to be a welcome visitor to its readers.

Godey's Lady's Book for August, with its beautiful engravings and interesting fashion plates, received in good time. Louis A. Godey, Phila.; $3 a year.

The Phrenological Journal for August is unusually interesting. This journal is by no means devoted to the advocacy of one set of ideas, as its name might imply; but is filled with choice reading upon general subjects. Samuel R. Wells,, 389 Broadway, New York; $3 a year.

Regulations and Premium List of the St. Louis Agricultural and Mechanical Association for their Eleventh Fair to begin October 2d, and continue six days.

List of Premiums and Regulations for the Thirty first Annual Fair of the New York State Agricultural Society, to be held at Albany, N. Y., from the 2d to the 6th of October inclusive.

Prospectus of the Illinois Industrial University with list of students, &c.

"Blackwood" for July, from Leonard Scott Publishing Company, has the following interesting table of contents: Fair to See, Part vii.; Mr. Mill on Land; The Coming Race; New Books; Education, Endowment and Competition; The Minister, The House and the Country; A History of the Commune of Paris.

For the little ones we have received "Oliver Optics Magazine for Boys and Girls," Boston; Lee & Shepard; $2 50 a year, and "The Little Corporal," Chicago, John E. Miller; $1 50 a year.

North Carolina Farmer.—Our friends of the *North Carolina Farmer* do not seem to think it necessary to give this journal credit for selections from our pages. An Essay upon Manures, by R. J. Hicks, read before the Goodwyn Agricultural Club, and reported expressly for us, appears in their paper of June 30th without credit. This is the second time they have appropriated an extended and important article, and the second time we have called their attention to it. We can assure them of a smaller exchange list, if they extend this policy to all their exchanges.

MISCELLANEOUS.

A Summer Day.

Sunshine over the meadow lands,
  Kissing the crimson clover,
And sunshine haunting the lily cups
  That the yellow bees hang over;
And sunshine over the hazy hills,
  And over the dimpling river,
And I wished that the sun and summer day
  Might shine and last forever.

We walked down by the meadow path,
  The broad highway forsaking,
For the quiet of that lovely spot
  Seemed better for our love making;
And I was silent and she was shy,
  As we walked down through the clover,
But we thought it the sweetest summer day
  That ever the sun shone over.

We heard the birds in the waving grass,
  As they twittered to each other
About the nests they had hidden away,
  And the coo of each glad bird mother;
And we thought, as we walked that summer day
  Through the clover blossoms together,
That at last the world was in perfect tune,
  In the glad, bright summer weather.

I cannot tell what I said to her,
  As we walked knee deep in clover;
But I know that the robins merrily sang
  Their sweetest of sweet songs over,
And down in my heart love's own bird sang
  A song that was gladder, sweeter,
And its echo joined with the world's sweet hymn,
  And made the day completer.

And when we came up the meadow path,
  Our hearts sang over and over;
"O, sweet, glad day for blossom and bird,
  And for every blithe young lover!"
And yet I know not the words that she said,
  Or whether she spoke at all:
But of all sweet days, that summer day
  I count as the best of all.

—*Exchange.*

Miss Althea's Rubbers.

"This is the best o' bleaching weather. I expected you'd have as much as two webs o' cloth out by this time. Either you ain't going to have another weddin' this fall, or mebbe the sheets and pillow-cases are all made," said Miss Althea Pratt, sliding in at our south door in a half-way manner peculiar to her, as if she never could fully commit herself to anybody's company.

"Three weddings in three years ought to last a long time," said mother, not without a dash of pride in the matter.

"This is such a dreadful marrying family, I thought you might have found somebody for Sylvie by this time."

"I really hav'nt thought to look for anybody. The other girls slid right into marriage, and homes of their own, before I knew it."

"So Sylvie ain't quite ready for her slide; mebbe she needs a little pushing. I thought I'd just drop in to tell you that its the fashion now to make pillow-cases rather skimpin, and then have great square covers, ruffled all around, and a big letter worked in the middle. You have to take 'em off, and fold 'em up very carefully, before you go to bed. When I was in Boston, brother Liphalet's wife had some of 'em with a big P in the middle; it might have stood for Pratt or pillow, I couldn't say for a surety which, and I wouldn't ask *her* for no money."

Miss Althea is perfectly aware that I, otherwise Sylvie, am standing in the pantry-window out of her sight, but within hearing of every word she says. She knows, too, that Steven Frazer is leaning against the window sill outside, taking eggs from my hands as I pass out to him half a dozen at a time. He always takes our eggs to market with those from his own farm, because mother is a widow, and has to depend on neighborly kindness for such small lifts to ward living.

Steven is very serious and business-like over counting the eggs, but his lips quiver a little with merriment over Miss Althea's pillow-cases. He is truly very handsome. I have tried for years to convince myself, that he has the common-place look of all other men I know—my sister' husbands, as well as the rest, men that I don't care to look at twice—but I can't do it. Steven's eyes have a shining depth, his features, mobility and a story-telling quality that I can find in no other face. I think Miss Althea is funny, too, and why can't he look up and share his appreciation with me? But he never does look up or down when I expect it—he is the most disappointing of men.

"Sylvie," said Miss Althea, putting her head into the pantry like some long-necked bird, "I forgot just where you come into the family. Is it you or Sophie that's just twenty-five."

"Neither," said I with a needless snap in my voice. "Sophie is the eldest of us all, and she is just twenty-four."

"Well, to be sure, you have such a mature look, so settled down like, that its hard to guess your ages."

"By the way," said Steven, looking up when he had laid the last egg carefully in the basket, "when shall we have our wedding, Sylvie?"

A great lump rose in my throat, the row of milk pans swam before my eyes.

"Not until we have had the wooing, if you please," I managed to say in a steady voice, and rushed into the kitchen without looking back.

I heard his wagon wheels sound faint and fainter in the distance, with a crushing sense of disappointment.

If you believe it, Steven had never spoken a word of love to me in his life, and then sprung that merciless question on me, all at once, about our wedding. I knew him well enough to be certain he was thoroughly in earnest.

It was the condensed crystal of many thoughts that he had uncovered before my eyes so suddenly.

"You didn't keep him long," said Miss Althea. "I guess it was the wind after all, that shut the pantry door in my face. I didn't know but you might have done it with a long-handled skimmer, or somethin', so's to have a crack with Steven, but I could have told you 'twan't no use. There's no palaver about him. A gal's a gal to him, and nothin' else."

"Mother," I said, dashing sideways at the subject which was in my thoughts, "do you think some women are pre-ordained from the beginning of the world to be old maids?"

"It may be so; but I am sure no woman was ever single except from her own choice. There comes to every woman at least one chance of marriage, if she has the presence of mind to grasp it."

"Marriage! yes, but suppose she wants love? I am twenty two, and no one has ever said 'I love you.'"

"Some things go without saying," said Steven Frazer, appearing suddenly at the south door. "I went off and left the eggs after all, and so came back for them. I have overheard no treason except Sylvie's last speech. Does every *man* have one chance of marriage, too?"

"Yea, verily, Steven, one chance of somebody loving him for himself, let him be ever so awkward and disagreeable."

"That's good news," said Steven."

"I've half a mind to tell you a story," said my mother, meditatively.

"With all my heart; the eggs can wait."

"You know what a rough husk my brother Shubael wears to all the world, but you may never know the warm heart that he hides under it. He was always like that from a boy, but he used to suffer from the most intolerable bashfulness. He was in a flame if a girl looked at him; if she spoke, his tongue clove to the roof of his mouth. I never pitied anybody so much in my life. It seemed to me that he only needed to pay attention (as the phrase is) to some nice girl in particular, to find out that there is very little in any woman to make a man afraid of her. I lay in wait for Shubael's opinions, till I discovered that he had a faint liking for a girl who was every whit as bashful as himself. It was impossible for either to go half way. I was foolish enough to take the girl into my plot, which dazed what wits she had whenever Shubael went near her, and the more because she really preferred him to any one else. I worked his courage up to the sticking point of asking her to let him go home with her one dark night from a 'quilting,' and was describing my success to your father, as we were taking the longest way home, when Shubael passed us alone walking very fast. I knew my plan had fallen through when I caught sight of his whimsical face. I had invented the mildest of formulas for him to use, and he marched up to her like a martyr to the stake, and repeated it without the least mistake. And what do you think she said?

'No I thank you; I've got rubbers.'

Then Shubael fled and never drew his breath till he was safe at home.

He laughed till the tears ran down his face, at himself and her, but from that day to this, he has let all women severely alone. If she had had her wits

about her that one night he might have made her happy all her life, instead of both growing more rugged and stiff-necked till they die. They had their chance and lost it!"

"Did she never have another?" asked Steven, with much curiosity.

"Not to my knowledge. She has lived alone, with only a cat for company, with so little business of her own that she must, perforce, mind other people's, and they don't like it."

"You must have one exception to your rule, mother. It is impossible that any one should ever have held out the ghost of a chance to Miss Althea. She was an old maid in her cradle."

"My dear Sylvie, it was Althea Pratt, and no other whose unlucky rubbers, made your Uncle Shubael an old bachelor. Her cheeks were as pink, and her tongue no sharper than yours, in those old times when we were girls together. Come, Steven, take the eggs and go your way, and don't entice me to be telling love stories at this time in the morning."

Mother went into the pantry, and that same little puff of wind or one like unto it shut her in.

I felt Steven's eyes like hot sunlight on my face, but his voice was steady as possible.

"I think I remember asking you a question half an hour ago, Sylvie."

"And have you forgot my answer?"

It would have been an immense relief just then to have twisted the corner of my apron, but I meant to be composed and ladylike, if I had perished in the attempt; so I kept my hands clasped on the table, and held hard.

"You cannot have meant that we have had no wooing. I saw long ago that you possessed every quality that I desire in a wife."

The boldness of this speech—so cold, so unimpassioned—was more than I could endure.

"You should look longer still before you leap. There may be many others who have every quality that you desire in a wife. Olivia Primrose is the very pattern of a farmer's helpmate. I may have a streak of sentiment that would not do credit to the choice of a Frazer."

I had meant to be sarcastic in the extreme, and Steven only threw back his head and laughed.

"I don't take those words to heart, Sylvie, because the trail of Miss Althea is over them all. She has been telling you that I proposed to Miss Primrose, and she rejected me, purposing to give her whole life wholly to the making of butter."

"I know better. Olivia would never refuse you."

"Ah, that puts me in hope again; if you think other women would be willing to take me, with the Frazer farm thrown in, you cannot altogether have cast me out from your own synagogue."

My lips began to tremble. I could not command them long enough to speak the words which came in a torrent.

The garish daylight, my calico gown, and Steven's thick boots—all these common things nipped any romance there might be about the subject of our talk, and wove a spell of silence about me. If he had so much as offered to touch my hand, or even my dress, I could, perhaps, have probed his seeming carelessness, and, by some circumlocution, divined whether he was choosing

me for a housekeeper, as the Frazers chose their wives, or as that other part of himself without which his life would ever after be tame and incomplete.

The clock ticked a great many times as I sat motionless under his eyes, inwardly torn with yearnings for that one word of love which never came.

"You have nothing to say to me, just now?" he asked at last.

I shook my head. He made one step forward, and it seemed to me that he half put out his arm, and then turned on his heel and walked away.

"You'd better stop here to tea on your way home;" called my mother from the pantry window, but she got no answer that was audible to me.

What did I care for the Frazer farm, or doing better than my sister? What I hungered and thirsted for was love in such a measure as should bring Steven to my side, and make him blind to the existence of all other women, though I were the veriest incapable that ever a man bound like a millstone about his neck. I would have taken him just as cheerfully, and worked for him all my days, if he had been a helpless cripple. He knew that I loved him; and he must often have read the dreadful fact in every line of my face, when he had given me one of his unexpected up-looks.

Steven and I had fallen in a dangerous habit of watching each other very early in life. He was my balance by which to weigh other men. When he went away to school and college, I gave him up for lost. Then his father died, and he came home to spend his life on the old farm. Many people called it a sacrifice, but he professed never to have had any other intention. A little learning did not prove "a dangerous thing," when applied to crops.

It was rather a pleasant thought, after all, when I came to digest it, that "I have every quality which he desired in a wife;" but if I lacked one or two of the useful ones, would he have love enough in his heart to supply their place? This was the rub.

Mother looked in and found me sitting as Steven had left me. I started up with a blush worthy of Uncle Shubael.

"There are early apples to sort," she said, suggestively.

"To be sure," said I, "and I'm the woman to sort them so thoroughly that there won't be one left for seed."

It was just like her to send me and my perturbation to have it out together in some shady corner of the yard.

I did my duty vigorously by the apples, but I kept up a terrible thinking withal—how Steven Frazer had walked home with me from singing-school, about a month before this time, in the delicious moonlight, without so much as offering his arm, or pausing a moment under the apple tree to lengthen his good bye. If he had such a thing as a wedding on his mind, then was the time of all others to mention it.

And a week later, when there was no moon, but one could see the Pleaides

"Glitter like a swarm of fire-flies tangled in a silver braid,"

he had taken me in his beach wagon to a party at a distant farm-house, going in the afternoon and returning in the most perfect of mellow evenings.

He had seemed so much more conscious of my existence than usual on that afternoon, that hope dawned in my heart that he would speak that night if ever he meant to do so.

We were driving through a belt of odorous pine woods, filled with "flashes

of silence," when we overtook a woman driving a laggard horse, and working her passage with the whip. She spoke to Steven, and proved to be one of his neighbors, going to watch with a sick sister.

"I'll take you there in half the time, if you'll get in with us, and send your boy back with the team," said Steven, almost eagerly.

The woman (could it be that she was really a woman, so to dash my cup of happiness from my lips?) accepted the offer readily.

Her sister might have been sick as "Simon Peter's wife's mother;" but if she had ever known

"A dearer one
Still, and a nearer one
Yet, than all other,"

she would have clung to her own wagon and let us go our own way alone. I realized, however, before I had poured out my vials of wrath on her, that it was Steven who had made the offer and betrayed his total indifference to the sweet loneliness which had been gathering around us among the pines. I am glad I had the grace to talk with the troublesome old woman and to listen with interest to the whole course of her sister's illness, from the very first symptom. I had my reward when Steven lifted me down at our gate, and she said:

"You're your mother's own gal! You hain't never let me feel that two's company and three's a crowd!"

Steven had walked up the long path with me to carry my shawl; and might have said just a word then—a woman can live long on only a word, if it be loving enough—but he almost threw the shawl across my arm, and ran down the walk as if he were glad to get rid of me. As I piled "Ossa on Pelion" in my thoughts against the possibility of his loving me as I desired to be loved, the forenoon rolled away, and the apples were sorted. Mother racked her brains after dinner to keep me busy. One would have thought her a stepmother of the most grinding type; but I thanked her in my heart.

"There comes Steven again," she said, as the sound of approaching wagon wheels came in at the open window, "and brother Shubael with him. You had better set the table now, Sylvie."

"Come in, Steven, come in," said Uncle Shubael, in that high, rasping tone that one gets living alone. "You can have a little peace in this house now Lucretia has married off three of 'em; Sylvie's quiet enough if you let her alone; but if you go to stir her up too much she's as peppery as any of the lot."

"Why Sylvie," said mother when we sat down to the table, "where in the world are your wits? You have put on white cups and gilt saucers."

"Her ribbons will always match, whether the dishes do or not, you may depend on't," said Uncle Shubael.

It promised to be the whitest of moonlight evenings, when Uncle Shubael pushed back his chair, and declared his intention of going home without loss of time.

"I always go to bed early when there's a moon," he said, "so's to be out of temptation. If a man ever makes a fool of himself, you may be sure he will do it in the moonlight."

"And how is it with woman?" said mother.

"Humph! Moonlight or sunlight's all one to her, I reckon."

"Mrs. Poyser said 'she would never deny women were fools—the Almighty made them to match the men.'" I put in—

"Who's Mrs. Poyser? does she live in these parts?"

"No."

"Glad to hear that. There's enough sharp-tongued women about here now, without any more moving in."

"Old Candace knew best," said mother. "She said 'Men was nat'rally foolish, but they was a great deal better than nuffin."

"Please convince Sylvie of that doctrine," said Steven, "while I go home with Uncle Shubael for safety's sake."

They went away together, and nothing would do but mother must have out the *Spectator*, and hear me read aloud till bedtime, while I was longing to sit on the doorstep, and pile up agony in the moonlight. It came to pass after that day that six mortal weeks dragged out their slow length, without my once seeing Steven Frazer. Sophie's two children came down with the measles, and I being the only single sister, was, of course, drafted for nurse. She mentioned once, as I was sitting in the darkened room, bathing a little fevered head, that Steven had stopped at the door, and left a message from mother, but she said I was busy just then. Oh, the blind cruelty of a married sister with a sick baby! Can anything come nigh unto it in the history of persecution? I stayed with Sophie till her children were convalescent, and then she let me depart in peace. I was trailing home one very dull afternoon, sourly adding up the hard work I had done, and the small credit which Sophie in her motherly kindness would ever give me for it, when a sort of vision of my future unrolled itself before my eyes. If I refused Steven because I was doubtful of the kind of love he felt for me, I knew I should never marry anybody else; I must inevitably come down to cats for company, and know no change in life except nursing my sister's children through all the ills that baby flesh is heir to. I was not the woman to "have a mission" and hew out a special niche for myself in the world. If I had a weakness, it was for being taken care of. Then it flashed upon me that Steven might consider his offer as already rejected, and so leave me no option in the matter. That thought was like touching a bare nerve; the pain of it almost made me stand still, but I hurried on again when I caught a quick familiar tread behind me.

"Sylvie," said Steven, coming up with me and shaking both of my hands, "you haven't the least idea how glad I am to see you—that is what there is left of you. Sophie has worn you to skin and bone. I stopped at her house, and she told me you had taken this road. You walked as if your feet were heavy. Perhaps, after all, you *have rubbers*, and don't care for my company."

He faced round suddenly, so as to bar my path, and held out his hands with a bright, yet slightly mischievous smile. I put my two hands in his and laid my face on them. I was too tired to do anything else. "Poor little thistle of a woman," he said, in an unsteady voice, and gathering me in his strong arms, "have you pricked me long enough, and will you show me your downy side at last?"

"Only love me a little," I whispered.

"I will do no such thing. I must love you with all my heart and strength, or not at all. Do you suppose that I did not see and pity your trouble? You wanted a lover who would go cross-gartered, like Malvolio, and waste himself in sighs for love of you. You could not put faith in one who pleaded his suit

in broad daylight through pantry windows. My darling, it was a vow, and this was the way I came to bind myself to it. When I was in college, a mere boy, I was bewitched into a passion for a girl not worthy to look into your face. I saw her first, and in fact always in moonlight walks under the shadows of elm trees, which must have some diabolical fascination about them. A genial dimness seemed to pervade all our intercourse until I found myself engaged. Then I knew that—

'Colors seen by candle light
Will not look the same by day!'

"Oh, it was heaven to me when I was able to break the cords that bound me to that woman, without being dishonorable! What a chain I should have dragged through life if I had married her! I made a vow then, that if I woed another woman it should be after the most prosaic method that I could devise, and in the broadest daylight. My greatest temptation to break the vow came over me in the pine woods, that glorious night we so opportunely overtook the old woman who was going to see her sister. If you had been cross then it would have been a comfort to me. Can you forgive me?"

I don't know that I answered in any set form of words, but Steven seemed satisfied and we walked home together through the foggy air as lightly as if our great content had transmuted it to a golden haze.

As we passed Miss Althea Pratt's little house, she was out of doors, struggling with a great rose-creeper which had fallen in a mass across her doorstep, and utterly refused to be held up with one hand while she nailed it to the doorpost with the other. Steven went in to help her, and was not a whit cast down by the ungracious thanks.

"No one shall ever cast a stone at Miss Althea in my hearing," he said: "her unlucky rubbers shall be her shield and buckler, whatever venom she may distil upon me."

When we reached home, Uncle Shubael was just getting into his wagon to drive off.

"Stay a bit," said Steven, "we have something to tell you."

"Don't want to hear none of your news. I knew by your looks you had been putting your foot in it. Lucretia's crying' over it already. Women always cry when a person of sense would laugh."

He was well out of the gate when he called me to speak to him, and turning his back squarely, thrust these words at me over his shoulder:

"I don't want you to be altogether a burden to Steven; so, when you're married, you may have that bit of pastur that dovetails into the Frazer farm."—*Selected.*

A Good Suggestion.—A lady makes a suggestion to the *Pacific Rural Press* which may be of some value: Referring to the burning of the Spotswood Hotel, and the loss of life consequent upon not being able to reach the upper windows with ladders, she suggests that strong hooks should project from the windows, especially the hall windows, to which, in the event of egress by the stairway being cut off, might be suspended light ladders. A succession of such ladders making practically an outside stairway. The ladders to be kept in the halls always ready for use.

Sale of Frogs for Food in France.—The exportation of frogs to France, says a French journal, has been largely extended of late. Mr. B——, of Vance, has dispatched 200,000 of them in three weeks, and lately he sent 30,000. These reptiles are principally sent to Rheims, Nancy, and Paris. A thousand frogs fetch 13 francs ($3), and are packed in a bag weighing 50 kilogrammes (100 pounds); their importation is free of duty. They are found chiefly at Vance, Fouches, on the borders of Lemeis, and that part of the province situated between Arlon and Houffalize. At Rheims, 25 pairs of thighs sell for 60 centimes (10 cents); nevertheless, the frogs are expected whole. The thighs are roasted, served with white sauce, after the fashion of fricassees, and flavored with capers. The skin—that sticky, slimy skin—is made into turtle soup; yes, the favorite mock-turtle is made principally from the descendents of the tadpoles which inhabit the marshes and fields of Luxembourg. The heads are put aside, and given to the hospitals of Paris, where they are made into soup for their sick inmates.

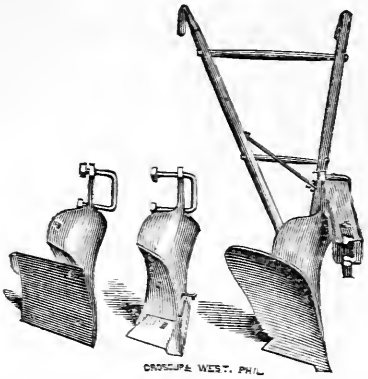
In culinary innovations, France certainly leads the world. Horseflesh is largely sold in the streets of Paris, and frogs, the very sight of which would make some of our wives and daughters shudder, are esteemed the greatest delicacy of her restaurant.—*W. Rural.*

What Scope of Country will Support a Railroad.—Col. Hammond, an experienced railroad man, says that a territory ten miles wide, on each side of a railroad, in a country capable of sustaining any ordinaril dense population, is capable of supporting it. Whenever railroads run out from any commercial centre, through such a country, they will be sure to bring a sufficient population to support them, within a very few years after their construction, if it is not already there when the road is projected. This is for railroads of the usual construction and equipment. It is but fair to infer that narrow gauge railroads, being cheaper of construction, can be supported by a proportionally less area and population.—*Pacific Rural Press.*

The Nation's Curse.—The Revenue Commissioners estimate that there are annually consumed in this country, 42,000,000 gallons of distiled spirits, 186,000,000 gallons of fermented liquors, and 10,000,000 gallons of imported liquors, the estimated cost of which is $500,000,000, on which the Government derives an income of $47,727,276. This, of course, does not include the liquor smuggled into the country, nor the immense amount secretly and illicitly manufactured, which would vastly increase this estimate; nor does it include the enormous loss annually sustained by labor and capital, the direct result of drinking habits, nor the suffering and vice directly caused by strong drink.—*Farmers' Home Journal.*

A young man says that there may have been such a thing as real true love in olden times, but that now the notion is entirely obsolete; and if you ask a young lady now a-days to share your lot, she immediately wants to know how large that "lot" is.

Infantile Conundrum.—Why is a baby like a sheaf of wheat? Because it is first cradled, and then thrashed, and finally becomes the flower of the family.



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